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Total number of hits satisfying chosen parameters:
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                                                                                                                                                                                                                                                                                                                                                                                 Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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1: /cgn2_6/ptodata/2,

2: /cgn2_6/ptodata/2,

3: /cgn2_6/ptodata/2,

4: /cgn2_6/ptodata/2,

5: /cgn2_6/ptodata/2,

6: /cgn2_6/ptodata/2,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                length: 0
length: 2000000000
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Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           July 3, 2001, 10:00:55; Search time 21.69 Seconds (without alignments) 8.359 Million cell updates/sec
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58
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/cgn2_6/ptodata/2/1aa/5B_COMB.pep:*
/cgn2_6/ptodata/2/1aa/5B_COMB.pep:*
/cgn2_6/ptodata/2/1aa/6B_COMB.pep:*
/cgn2_6/ptodata/2/1aa/6B_COMB.pep:*
/cgn2_6/ptodata/2/1aa/PCTUS_COMB.pep:*
/cgn2_6/ptodata/2/1aa/backfiles1.pep:*
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US-08-417-174-46
US-08-902-516-29
US-09-036-582-26
US-09-036-417-174-47
US-08-417-174-121
US-07-891-942G-6
US-08-417-174-27
US-08-417-174-27
US-08-417-174-27
US-08-417-174-27
US-08-417-174-27
                                                                              US-08-417-174-77

US-08-917-174-72

US-08-917-174-72

US-08-917-174-74

US-08-917-174-75

US-08-917-174-76

US-08-417-174-76

US-08-417-174-77

US-08-417-174-77
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6, Ap
27, 1
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71, 1
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89
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                                  Appl
Appl
                                                          ; MOLECULE TYPE: peptide US-08-787-547-61
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US-08-787-547-61
Query Match
Best Local S
Matches 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 6
Patent No.
                                                                                                                TELEX: 200154
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Hedley, Mary Lynne
APPLICANT: Curley, Joanne M.
APPLICANT: Langer, Robert S.
TITLE OF INVENTION: MICROPARTIC
TITLE OF INVENTION: OF NUCLEIC
NUMBER OF SEQUENCES: 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER: IBM Compatible
OPERATING SYSTEM: Windows95
SOFTWARE: PastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/787,547
EILING DATE: 22-TAN-1997
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
                                                                                                                                                                                         APPLICATION NUMBER:
FILING DATE:
ATTORNEY_AGENT INFORMATION:
NAME: Fraser, Janis K.
REGISTRATION NUMBER: 34,819
                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
                                                                                                                                                            REFERENCE/DOCKET NUMBER: 08
TELECOMMUNICATION INFORMATION:
TELEPHONE: 617-542-5070
                                                                                                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS
                                                                                                                              TELEFAX: or.
TELEFAX: or.
200154
                                                                                          LENGTH:
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                                                                                 TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                 COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE:
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5. 5783567
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 Similarity
8; Conserv
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                                                                                          amino acid
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225 Franklin Street
                                                                                                                                                                                                                                                                                                                                                                                 SD
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  Conservative
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88.9%;
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                                                                                                                           61:
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US-08-970-725-4
PCT-US-970-725-4
US-08-439-817-205
US-08-241-054-85
US-08-241-054-91
US-08-390-156A-43
US-08-390-156A-43
US-08-439-817-65
US-08-439-817-65
US-08-4485-508-85
US-08-4485-508-91
US-08-044-621D-35
US-08-044-621D-35
US-08-047-370-11
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PCT-US96-09848-31
PCT-US96-09848-15
Score 53; DB 1; Lo
Pred. No. 1.4e+05;
D; Mismatches 1;
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                      Length
  Indels
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Result No.

Score

Match

0;

Gaps

0;

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Database

Minimum DB seq Maximum DB seq

Post-processing:

Title: Perfect score:

Run on

Scoring table: Sequence:

Sequence

36, Appli 15, Appli 4, Appli 4, Appli 4, Appli 50, Appli 91, Appl 91, Appl

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                                                                                                                                 US-08-902-516-29
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             GENERAL INFORMATION:
APPLICANT: SOO HOO,
TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                              Sequence 29, Application US/08902516 Patent No. 5891432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 46, Appli
Patent No. 5844075
                                                                                                                                                                                                                                                                                  Query Match
Best Local :
                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER: IBM PC COMPUTER: COMPUTER: PC-DOS/MS-DOS OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: ASCII CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/231,565
FILING DATE: 22-APR-1994
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
 NUMBER OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 20,
TELECOMMUNICATION INFORMATION
TELEPHONE: (212) 758-4800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: KAWAKAMI, YUTAKA; ROSENBERG, APPLICANT: STEVEN A. TITLE OF INVENTION: MELANOMA ANTIGENS A TITLE OF INVENTION: THEIR USE IN DIAGNO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEFAX: 1-1792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FITLE OF INVENTION:
                                                                                                                                                                                                                                                                                  Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: US/O FILING DATE: 05-APR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STREET:
                                                                                                                                                                                                                                                                                                                                                                                                  STRANDEDNESS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                   LENGTH:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  USA
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                                                              Soo Hoo,
                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                    Unknown
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                                                                                                                                                                                                                                                                                                                                                                                                    Unknown
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                                                                 William
                                                                                                                                                                                                                                                                                  91.4%;
MEMBRANE-BOUND CYTOKINE COMPOSITIONS
COMPRISING GM-CSF AND METHODS OF MODULATING AN IMMUNE
RESPONSE USING SAME
50
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                  46:
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Pred. No.
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                                                                                                                                                                                                                                                                                  No. 1.4e+05;
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US-09-036-582-26
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                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
APPLICANT: van der Bruggen, Pierre
APPLICANT: van der Bruggen, Pierre
APPLICANT: Cornelis, Guy R.
TITLE OF INVENTION: DELLYERY OF PROTEINS INTO EUKARYOTIC CELLS
TITLE OF INVENTION: WITH RECOMBINANT YERSINIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 88.3
                                                            Query Match
Best Local Similarity
Matches 8; Conserv
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SEQ ID NO 26
LENGTH: 9
                                                                                                                                                                                                                                                                                                                                                                                           Sequence 2
Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEFAX: (619)535-8949
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 9 amino acids
TYPE: amino acid
TOPOLOGY: linear
                                                                                                                                                                                                                                        FILE REFERENCE: 11154
CURRENT APPLICATION NUMBER: US/09/036,582A
CURRENT FILING DATE: 1998-03-06
NUMBER OF SEQ ID NOS: 39
                                                                                                                                                                               TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US/08/902,516
FILING DATE: 29-JUL-1997
CLASSIFICATION: 424
ATTORNEY/AGENT INFORWATION:
NAME: Campbell, Cathryn A.
REGISTRATION NUMBER: 31,815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOFTWARE: PatentIn Rel CURRENT APPLICATION DATA:
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TELECOMMUNICATION INFORMATION:
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OPERATING SYSTEM:
SOFTWARE: PatentI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STREET: 4370 La
CITY: San Diego
STATE: Californ
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STREET: 4370 La Jolla Village Drive,
                                1 KTWGQYWAV 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 KTWGQYWQV 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 KTWGQYWAV 9
KTWGQYWQV 9
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5. 5965381
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: United States
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                                                              Conservative
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IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
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88.9%;
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                                                                             Score 53; DB 2;
Pred. No. 1.4e+05;
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Pred. No. 1.
                                                                Mismatches
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                                                                                            Length 9;
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RESULT 5 US-08-417-174-47

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; TYPE: amino acid
; STRANDEDNESS: Unkn
; TOPOLOGY: Unknown
; MOLECULE TYPE: Pepti
US-08-417-174-47
                                                                                                                                                                                                                          RESULF 6
US-08-417-174-121
: Sequence 121, Application US/08417174
: Patent No. 5844075
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TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
TELEFAX: (212) 751-6849
TELEX: 421792
INFORMATION FOR SEO ID NO: 47:
SEQUENCE CHARACTERISTICS:
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Patent No.
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Best Local
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APPLICANT: KAWAKAMI,
APPLICANT: STEVEN A.
                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/417,174
APPLICATION NUMBER: US/08/231,565
FILING DATE: 22-APR-1994
                                                                                          CORRESPONDENCE ADDRESS:
                                                                                                                          TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                         APPLICANT: KAWAKAMI, YUTAKA; ROSENBERG APPLICANT: STEVEN A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 22-APR-1994
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
REGISTRATION NUMBER: 37,:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: TITLE OF INVENTION:
                                                                                                             NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES:
CITY: NEW YORK
STATE: NEW YORK
COUNTRY: USA
ZIP: 10154
                                                            STREET:
                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity les 8; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: ASCII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER: IBM PC CUMPALLED OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDIUM TYPE:
                                                                             ADDRESSEE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         47, Application US/08417174
5. 5844075
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                                                            345 PARK AVENUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           E: MORGAN & FINNEGAN, L.L.P.
345 PARK AVENUE
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                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unknown
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IBM PC COMPATIBLE
                                                                             MORGAN & FINNEGAN, L.L.P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unknown
                                                                                                           MELANOMA ANTIGENS AND
THEIR USE IN DIAGNOSTIC AND THERAPEUTIC
METHODS
126
                                                                                                                                                                                                                                                                                                                                                                                                      91.4%;
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THEIR USE IN DIAGNOSTIC AND THERAPEUTIC
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                                                                                                                                                                                                                                                                                                                                                                                       Score 53; DB 2; Pred. No. 0.012; 0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                   Length 10
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Best Local 9
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TELEX: 421792
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION: APPLICANT: Kwon,
                 APPLICATION NUMBER: 06/9:
FILING DATE: 06-0CT-1986
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/31
FILING DATE: 07-JUN-1989
                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MG-DOS
OPERATING SYSTEM: PC-DOS/MG-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
                                                                                                          CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                  SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: CDNATITLE OF INVENTION: A RECUMENCES: 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELECOMMUNICATION INFORMATION:
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FILING DATE: 05-APR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/231,565
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FILING DATE: 07-JUN-1989
ATTORNEY/AGENT INFORMATION:
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nes 8; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE: ASCII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                              APPLICATION NUMBER: US/07/891,942G
FILING DATE: 01-JUN-1992
                                                                                                                                                                                                                                                                                                                COUNTRY:
                                                                                                                                                                                                                                                                                                                                     STATE:
                                                                                                                                                                                                                                                                                                                                                      CITY: Ithaca
                                                                                                                                                                                                                                                                                                                                                                   STREET:
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                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE: Christopher A. Michaels, Barnard, Brown &
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TVENTION: CDNA CLONES FOR HUMAN TYROSINASE AND FOR
TVENTION: A REGULATORY PROTEIN IN THE MELANIN PROT
                                                                                                                                                                                                                                                                                                                  USA
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(212) 751-6849
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88.9%;
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                                      07/362,847
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Pred. No. 0.75;
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TELECOMMUNICATION INFORMATION: TELEPHONE: 607-273-1711

REGISTRATION NUMBER: 34 REFERENCE/DOCKET NUMBER:

34,390

IND1

TELEFAX:

607-273-2609

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Query Match
Best Local Similarity
""" B; Conserve
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: Sequence 27, Application US/08417174

: Patent No. 5844075
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APPLICANT: KAWAKA
APPLICANT: STEVEN
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PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/237-565
FILING DATE: 22-APR-1994
                                                                                   SOFTWARE: ASCII
CURRENT APPLICATION DATA:
                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION: MELANOM.
TITLE OF INVENTION: THEIR US
TITLE OF INVENTION: METHODS
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                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES:
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                                                                                                               COMPUTER: IBM PC
OPERATING SYSTEM:
                                                   APPLICATION NUMBER: US/08/417,174 FILING DATE: 05-APR-1995
                                                                                                                                                                                   COUNTRY: US
ZIP: 10154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DATE: October-1991
RELEVANT RESIDUES IN SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY: 11
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near the silver coat color locus on mouse
chromosome 10 and is in a syntenic region
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Copeland, Neal G
Gilbert, Debra J
Jenkins, Nancy
                                                                                                                                                                                                    USA
                                                                                                                                                                                                                                                   345 PARK AVENUE
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Kobayashi, Yv
Kim, Kack K
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                                                                                                                  IBM PC COMPATIBLE
SYSTEM: PC-DOS/MS-DOS
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88.9%;
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; STRANDEDNESS: Ünknowr
TOPOLOGY: Unknown
; MOLECULE TYPE: Protein
US-08-417-174-27
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Best Local S
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                                                         INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                  CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
REGISTRATION NUMBER: 37,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 20
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
TELEFAX: (212) 751-6849
                                                                                                                       REFERENCE/DOCKET NUMBER: 20
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
                                                                                                                                                                                                                                                              CURRENT APPLICATION DATA:
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MEDIUM TYPE: FLOPPY DISK
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NAME: CAROL M. GRUPPI
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION: TITLE OF INVENTION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            154 KTWGQYW 160
                                                                                                                                                                                                                                                                             COMPUTER: IBM PC COMPATIBLE OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: ASCII
                                                                                                                                                                                                                                                                                                                                                                                    CITY: NEW YORK
STATE: NEW YORK
STRANDEDNESS:
TOPOLOGY: Unl
                                                                                                                                                                                                                                  APPLICATION NUMBER: US/0 FILING DATE: 22-APR-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
                                                                                                         TELEFAX:
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                                                                                                                                                                                                                                                                                                                                                                                                                  STREET:
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                                            LENGTH:
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                            amino acid
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                                                                                                          (212) 751-6849
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               Unknown
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     86.2%;
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                                                                                                                                                                     37,341
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US-08-417-174-71
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Best Local Similarity
7; Conserve
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Sequence 71, Application US/08417174
Patent NO. 5844075
GENERAL INFORMATION:
APPLICANT: KAMAKAMI, YUTAKA; ROS
APPLICANT: STEVEN A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 27, Application US/09007961 Patent No. 5994523
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                  TELEFAX: (212) 751-68-
TELEX: 421792
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION DATA:

APPLICATION NUMBER: 08/231,56
FILING DATE: 22-APR-1994
ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 2026
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
TELEPAX: (212) 751-6849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION DATA: APPLICATION NUMBER: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: STEVEN A.
TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
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                                                                                                                                 154 KTWGQYW 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            154 KTWGQYW 160
                                                                                                                                                                                                                                                                                           TYPE: amino acid
STRANDEDNESS: Un)
TOPOLOGY: Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY:
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                                                                                                                                                              1 KTWGQYW 7
                                                                                                                                                                                                                                                                                                                                       LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 KTWGQYW 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       F: 345 PARK AVENUE
NEW YORK
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          USA
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                                                                                                                                                                                                                                                                                              Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MORGAN & FINNEGAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FLOPPY DISK
                                                                                                                                                                                                                                                                                Protein
                                                                                                                                                                                                                                                                                                           Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              THEIR USE IN DIAGNOSTIC AND THERAPEUTIC METHODS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  86.2%;
100.0%;
                                                                                                                                                                                      86.2%; Score 50;
100.0%; Pred. No.
tive 0; Mismatc
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                YUTAKA; ROSENBERG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 08/231,565
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                                                                                                                                                                                                                                                                                                                                                                    27:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
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                                                                                                                                                                                           Mismatches
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2.1;
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                                                                                                                                                                                                                   Length 661;
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                                                                                                                                                                                           Indels
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US-08-417-174-72
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                                                                                                                                                                                                                                                                           Sequence 72, Application US/08417174 Patent No. 5844075
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                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                 ZIP: 10154
COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY
TRM PC COM
                                                                                                                                                                                      APPLICANT: KAWAKAMI, YUTAKA, APPLICANT: STEVEN A. TITLE OF INVENTION: MELANOM. TITLE OF INVENTION: METHODS
                                                                                                                                                           NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
COMPUTER: IBM PC COMPATIBLE OPERATING SYSTEM: PC-DOS/MS-SOFTWARE: ASCII
                                                                                                       STATE:
                                                                                                                   CITY: NEW YORK
                                                                                                                               STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STREET:
                                                                                     COUNTRY:
                                                                                                                                               ADDRESSEE:
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                                                                                                    NEW YORK
                                                                                                                               345 PARK AVENUE
                                                                                      USA
                                                                                                                                                                                                                                                KAWAKAMI, YUTAKA; ROSENBERG,
                                                                                                                                             MORGAN & FINNEGAN, L.L.P
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FLOPPY DISK

MELANOMA ANTIGENS AND THERAPEUTIC THEIR USE IN DIAGNOSTIC AND THERAPEUTIC

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STRANDEDNESS:
TOPOLOGY: Unki
MOLECULE TYPE:
US-08-417-174-71
                                Best Local Similarity
Matches 7; Conserv
                                                                                                                                                                                                                                  TELEX: 421792
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                        REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 20
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
TELEFAX: (212) 751-6849
                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION DATA:
APPLICATION NUMBER: (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-
SOFTWARE: ASCII
CURRENT APPLICATION DATA:
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MEDIUM TYPE: FLOPPY DISK
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TITLE OF INVENTION:
                                                                                                                                                                                                                  SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 22-APR-1994
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: US/08/417,174 FILING DATE: 05-APR-1995
2 TWGQYWAV 9
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                                Conservative
                                                                                                                                                    Unknown
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                                                                                                                                                                   Unknown
                                                  82.8%;
87.5%;
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                                                                                                                                                                                                                                                                                                                                                                                                                   us/08/231,565
                                                                                                                                                                                                                                   71:
                                  0; Mismatches
                                                                                                                                                                                                                                                                                                                 2026-4124US1
                                                  Score 48; DB 2;
Pred. No. 1.4e+05;
                                                                 Length 9;
                                Indels
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MOLECULE TYPE: Peptide
US-08-417-174-72
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Best Local Similarity 8/...
Thes 7; Conservative
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                                                                                                                                               SOFTWARE: ASCII
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/417,174
FILLING DATE: 05-APR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/231,565
FILLING DATE: 22-APR-1994
CLASSIFICATION: 435
TELEX: 421792
INFORMATION FOR SEQ ID NO:
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                NAME: CAROL M. GRUPPI
REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 20
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
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REFERENCE/DOCKET NUMBER: 20
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
TELEPAX: (212) 751-6849
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FILING DATE: 05-APR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/231,565
FILING DATE: 22-APR-1994
                                                                                                                                   ATTORNEY/AGENT INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                    COMPUTER: IBM PC COMPATIBLE OPERATING SYSTEM: PC-DOS/MS-DOS
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STRANDEDNESS: Unk
                                  TELEFAX:
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                                                                                                                                                                                                                                                                                                                                                                                                                        345 PARK AVENUE
                                  (212) 751-6849
                                                                                                                                                                                                                                                                                                                                                                       USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KAWAKAMI, YUTAKA; ROSENBERG, STEVEN A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        METHODS
3: 126
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87.5%;
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                                                                                    2026-4124US1
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; TYPE: amino acid
; STRANDEDNESS: Unkno
; TOPOLOGY: Unknown
; MOLECULE TYPE: Peptid
US-08-417-174-74
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; TOPOLOGY: Unk
; MOLECULE TYPE:
US-08-417-174-73
Q
                   Query Match
Best Local Similarity
"hes 7; Conservations
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Best Local Similarity 87:
Matches 7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                             INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                       REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 20
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
TELEPAX: (212) 751-6849
                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: US/08/417,174
FILING DATE: 05-APR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/231,565
FILING DATE: 22-APR-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: ASCII
CURRENT APPLICATION DATA:
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MEDIUM TYPE: FLOPPY DISK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: KAWAKAMI, YUTAKA; ROSENBERG, APPLICANT: STEVEN A.
TITLE OF INVENTION: MELANOMA ANTIGENS A TITLE OF INVENTION: THEIR USE IN DIAGNO TITLE OF INVENTION: METHODS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                         CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER: IBM PC COMPATIBLE OPERATING SYSTEM: PC-DOS/MS-DOS
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STATE: NEW YORK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .2 TWGQYWAV 9
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   2 TWGQYWAV 9
                                                                                                                                                                                              ENGTH:
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5844075
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 345 PARK AVENUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    USA
                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unknown
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                                                                                                                                                             Unknown
                                                82.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MELANOMA ANTIGENS AND
THEIR USE IN DIAGNOSTIC AND THERAPEUTIC
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                                                 Score 48; DB 2;
Pred. No. 1.4e+05;
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Pred. No. 1.4e+05;
D; Mismatches 1
                                  Mismatches
                                  1; Indels
                                                               Length 9;
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                                  0;
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                                 Gaps
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CITY: NEW YORK

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; MOLECULE TYPE:
US-08-417-174-75
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                                                                                                                                                                   Sequence 68, Application US/08417174
Patent No. 5844075
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 75, Application US/08417174 Patent No. 5844075
                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
                                                                                                                                                       GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION NUMBER: US/08/231,565
FILING DATE: 22-APR-1994
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
NAME: CAROL M. GRUPPI
                                                             APPLICANT: KAWAKAMI, YUTAKA; ROSENBERG,
APPLICANT: STEVEN A.
TITLE OF INVENTION: MELANOMA ANTIGENS AND
TITLE OF INVENTION: THEIR USE IN DIAGNOSTIC AND THERAPEUTIC
TITLE OF INVENTION: METHODS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 20
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
TELEPAX: (212) 751-6849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION DATA:
                                CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: STEVEN A.
TITLE OF INVENTION: 1
TITLE OF INVENTION: 1
TITLE OF INVENTION: 1
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                                                  NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEFAX: (41.
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STATE: NEW YORK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: US/08 FILING DATE: 05-APR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: ASCII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER: IBM PC COMPATIBLE OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY:
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                   ADDRESSEE:
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345 PARK AVENUE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unknown
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                                                                                                                                                                                                                                                                                                                                                                                                                                                   Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unknown
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                                                                                                                                                                                                                                                                                                                                                              82.8%;
87.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US/08/417,174
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                                                                                                                                                                                                                                                                                                                                              0; Mismatches
                                                                                                                                                                                                                                                                                                                                                              Score 48; DB 2;
Pred. No. 1.4e+05
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GENERAL INFORMATION:
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Best Local :
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TELEX: 421792
INFORMATION FOR SEQ ID NO:
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APPLICANT: STEVEN A.
TITLE OF INVENTION: M
TITLE OF INVENTION: T
TITLE OF INVENTION: M
                                                                                               COMPUTER: 1BM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII
CURRENT APPLICATION DATA:
                                            APPLICATION NUMBER: US/08 FILING DATE: 05-APR-1995 PRIOR APPLICATION DATA:
                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
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TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
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ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US/08/417,174
FILING DATE: 05-APR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/231,565
FILING DATE: 22-APR-1994
CTJASSIETZN- 438
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SOFTWARE: ASCII
CURRENT APPLICATION DATA:
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MEDIUM TYPE: FLOPPY
                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
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STRANDEDNESS: Unk
TOPOLOGY: Unknown
                                                                                                                                                                                                       COUNTRY: U
          APPLICATION NUMBER: US/08/231,565 FILING DATE: 22-APR-1994
                                                                                                                                                                                                                                           STATE:
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CLASSIFICATION:
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Y: USA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IBM PC COMPATIBLE
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77.8%;
                                                                                                                                                                                                                                                                                                                                            METHODS
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                                                                                US/08/417,174
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Pred. No. 1.4e+05;
0; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                            IN DIAGNOSTIC AND THERAPEUTIC
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Length 9; Indels

0;

Gaps

ATTORNEY/AGENT INFORMATION: NAME: CAROL M. GRUPPI

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; MOLECULE TYPE: US-08-417-174-70
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GENERAL INFORMATION:
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Best Local
                                                                                                                                                                                                                                                           COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/417,174
FILING DATE: 05-APR-1995
PRIOR APPLICATION DATA:
APPLICATION UMBER: US/08/231,565
FILING DATE: 22-APR-1994
CLASSIFICATION: 435
                                                                                                               TELEX: 421792
INFORMATION FOR SEQ ID NO:
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                             REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 20
TELECOMMUNICATION INFORMATION:
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ZIP: 1015'
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MEDIUM TYPE: FLOPPY DISK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: KAWAKAMI, YUTAKA; ROSENBERG, APPLICANT: STEVEN A.
TITLE OF INVENTION: MELANOMA ANTIGENS A TITLE OF INVENTION: THEIR USE IN DIAGNO TITLE OF INVENTION: METHODS NUMBER OF SEQUENCES: 126
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 20
TELECOMMUNICATION INFORMATION:
                                                                                                 SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                              ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: amino acid
STRANDEDNESS: Unki
TOPOLOGY: Unknown
                                TOPOLOGY:
                                              TYPE: amino acid
STRANDEDNESS: Unk
                                                                                                                                               TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STREET:
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                                                                                LENGTH:
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                                                                                                                                               (212) 758-4800
(212) 751-6849
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(212) 751-6849
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                                   Unknown
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                                                 Unknown
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77.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MELANOMA ANTIGENS AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               THEIR USE IN DIAGNOSTIC AND THERAPEUTIC
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; TYPE: amino acid
; STRANDEDNESS: Unkn
; TOPOLOGY: Unknown
; MOLECULE TYPE: Pepti
US-08-417-174-76
RESULT 20
US-08-417-174-77
; Sequence 77, Application US/08417174
; Patent No. 5844075
; GENERAL INFORMATION:
                                                                                                                                                         Query Match
Best Local Similarity
7; Conserve
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Best Local Similarity
Watches 7; Conserve
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 76,
                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US/08/
FILING DATE: 05-APR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/
FILING DATE: 22-APR-1994
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: MELTITLE OF INVENTION: THE TITLE OF INVENTION: METITLE OF SEQUENCES: 12 CORRESPONDENCE ADDRESS:
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TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
TELEFAX: (212) 751-6849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER: LBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII
CURRENT APPLICATION DATA:
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MEDIUM TYPE: FLOPPY DISK
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: KAWAKAMI, YUTAKA; ROSENBERG APPLICANT: STEVEN A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CITY: NEW YORK STATE: NEW YORK
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                                                                                                                                          1 KTWGQYWAV 9
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345 PARK AVENUE
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                                                                                                                                                                                                                                                                                          Unknown
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: 126
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THERAPEUTIC
                                                                                                                                                                                      75.9%;
77.8%;
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77.8%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                          37,341
                                                                                                                                                                                      Score 44; DB 2;
Pred. No. 1.4e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                2026-4124US1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 47; DB 2;
Pred. No. 1.4e+05;
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                                                                                                                                                                        Indels
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PC-DOS/MS-DOS

37,341

2026-4124US1

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RESULT 21
US-08-417-174-78
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Best Local Similarity
".~+~hes 7; Conservat
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                                                                                                                                                                                                          GENERAL INFORMATION:
APPLICANT: KAWAKAMI,
APPLICANT: STEVEN A.
TITLE OF INVENTION: MI
TITLE OF INVENTION: TI
                                                                                                                                                                                                                                                                                               Sequence 78, Application US/08417174 Patent No. 5844075
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTORNEY/AGENT INFORMATION:

NAME: CAROL M. GRUPPI
REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 2026
TELECOMMUNICATION INFORMATION:
TELEFAX: (212) 758-4800
TELEFAX: (212) 751-6849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEX: 421792
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS:
ADDRESSEE: MORGAN & FINNEGAN, L.L.P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: ASCII
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
                COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
                                                                                                                                                         CORRESPONDENCE ADDRESS:
                                                                                                                                                                                             TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/231,565
ETILING DATE: 22-APR-1994
CLASSIFICATION: 435
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TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                           NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: amino acid
STRANDEDNESS: Unl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US/OR FILING DATE: 05-APR-1995
                                                                 COUNTRY:
                                                                                     CITY: NEW YORK
STATE: NEW YORK
                                                                                                                        STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER: IBM PC COMPATIBLE OPERATING SYSTEM: PC-DOS/MS-DOS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CITY: NEW YORK
STATE: NEW YORK
                                                                                                                                            ADDRESSEE:
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                                                                                                                        345 PARK AVENUE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KAWAKAMI, YUTAKA; ROSENBERG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unknown
E: Peptide
IBM PC COMPATIBLE
                                                                                                                                        MORGAN & FINNEGAN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unknown
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                                                                                                                                                                                             METHODS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           74.18;
77.88;
                                                                                                                                                                                                            MELANOMA ANTIGENS AND
THEIR USE IN DIAGNOSTIC AND THERAPEUTIC
                                                                                                                                                                           126
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 43; DB 2;
Pred. No. 1.4e+05
                                                                                                                                        L.L.P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 2; Length 9;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Patent No. 5844075
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
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Best Local :
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TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
TELEFAX: (212) 751-6849
TELEFAX: 421792
INFORMATION FOR SEQ ID NO: 78:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: KAWAKAMI,
APPLICANT: STEVEN A.
TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                        COMPUTER: LBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 22-APR-1994
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US/08/417,174
FILING DATE: 05-APR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/231,565
FILING DATE: 22-APR-1994
                                                                                APPLICATION NUMBER: US/08/231,565
FILING DATE: 22-APR-1994
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
                                                                                                                                                                       APPLICATION NUMBER: US/OFFILING DATE: 05-APR-1995 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: ASCII
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
              TELECOMMUNICATION INFORMATION: TELEPHONE: (212) 758-4800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOLECULE TYPE:
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                                                   REGISTRATION NUMBER: 37, REFERENCE/DOCKET NUMBER:
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tes 6; Conserv
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TOPOLOGY: Un
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5. 5844075
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                                                                                                                                                                                                                                                                                                                                                                     NEW YORK
                                                                                                                                                                                                                                                                                                                                                                                                      345 PARK AVENUE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KAWAKAMI, YUTAKA; ROSENBERG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unknown
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THEIR USE IN DIAGNOSTIC AND THERAPEUTIC METHODS

US/08/417,174

37,341

2026-4124US1

MELANOMA ANTIGENS AND

Peptide Unknown

74.18; 85.78;

Score 43; DB 2; Pred. No. 1.4e+05; 0; Mismatches 1

Length 9;

0;

Gaps

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; TYPE: amino acid
; STRANDEDNESS: Unkno
; TOPOLOGY: Unknown
; MOLECULE TYPE: Peptid
US-08-417-17,4-79
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               Query Match
Best Local Similarity
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                                                                                                  ; TOPOLOGY: Ur ; MOLECULE TYPE: US-08-417-174-80
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Best Local :
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                                                                                                                                                                                                        INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: KAWAKAMI,
APPLICANT: STEVEN A.
TITLE OF INVENTION: N
TITLE OF INVENTION: N
                                                                                                                                                                                                                                                REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 20
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
COMPUTER: IBM PC COMPATIBLE
                                                                                                                                                                                       SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                           ATTORNEY/AGENT INFORMATION: NAME: CAROL M. GRUPPI
                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/0
FILING DATE: 22-APR-1994
                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: ASCII
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION: ME NUMBER OF SEQUENCES: 1 CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                          TELLEFAX: (22792
                                                                                                                                           TYPE: amino acid
STRANDEDNESS: Un)
                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US/0 FILING DATE: 05-APR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STREET: 345 PA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Match 74.18; Local Similarity 85.78;
                                                                                                                                                                                                                                                                                                                                      CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                        OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STATE: NEW YORK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH:
 3 WGQYWAV 9
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         345 PARK AVENUE
                                                                                                                                                                                                                                 (212) 751-6849
                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              USA
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                                                                                                                               Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STEVEN A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KAWAKAMI, YUTAKA; ROSENBERG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MORGAN & FINNEGAN, L.L.P.
                                                                                                                                             Unknown
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                                          74.1%;
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                                                                                                                                                                                                                                                                                                                                                                   US/08/231,565
                                                                                                                                                                                                                                                                                                                                                                                                              US/08/417,174
                              0
                                                                                                                                                                                                                                                                              2026-4124US1
                                          Score 43; DB 2;
Pred. No. 1.4e+05;
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Pred. No.
                              Mismatches
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                                                     Length 9;
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                              Indels
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                                                                                                                                                                                      RESULT
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                                                                                                                                                                                                                                                                                                      Query Match
Best Local S
Matches 6
                                                                                                                 Patent No. 5844075
GENERAL INFORMATION:
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                                                                                                                                                    Sequence 82,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/417
FILING DATE: 05-APR-1995
PRIOR APPLICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: CAROL M GRUPPI
REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 2026
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
TELEPHONE: (212) 751-6849
TELEPAX: (212) 751-6849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: KAWAKAMI, APPLICANT: STEVEN A. TITLE OF INVENTION: TITLE OF INVENTION: TITLE OF INVENTION:
APPLICANT: KAWAKAMI, YUTAKA; ROSENBERG,
APPLICANT: STEVEN A.
TITLE OF INVENTION: MELANOMA ANTIGENS AND
TITLE OF INVENTION: THEIR USE IN DIAGNOSTIC AND THERAPEUTIC
TITLE OF INVENTION: METHODS
NUMBER OF SEQUENCES: 126
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY |
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                         MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: amino acid
STRANDEDNESS: Unl
TOPOLOGY: Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OPERATING SYSTEM:
SOFTWARE: ASCII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CITY: NEW YORK
                                                                                                                                                                                                                                                                                                      Local Similarity 85.
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                                                                                                                                      2, Application US/08417174 5844075
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SYSTEM: PC-DOS/MS-DOS
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                                                                                                                                                                                                                                                                                                                                                                                                                                          Unknown
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THEIR USE IN DIAGNOSTIC AND THERAPEUTIC
METHODS
126
                                                                                                                                                                                                                                                                                                                       74.1%;
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Pred. No. 1.4e
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ADDRESSEE:

NEW YORK

345 PARK AVENUE

MORGAN & FINNEGAN, L.L.P.

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Best Local Similarity
Chahes 6; Conservat
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                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 6, Applic Patent No. 5792624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX: (212) 751-684
TELEX: 421792
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US/08/231
FILING DATE: 22-APR-1994
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
REGISTRATION UNMER: 37,341
REFERENCE/DOCKET NUMBER: 2026
                                                                                                                                                                                                                                                                               APPLICANT: Tripp, Cy
APPLICANT: Wisnewski
APPLICANT: Grieve, R
APPLICANT: Frank, Gli
TITLE OF INVENTION: I
TITLE OF INVENTION: I
            MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: Windows 95
SOFTWARE: WordPerfect for Windows, Version 7.1
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US/O FILING DATE: 05-APR-1995 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: ASCII
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
                                                                                                     COMPUTER READABLE FORM:
                                                                                                                                                                                                                                              NUMBER OF SEQUENCES: 1
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TELEPHONE: (212) 758-4800
TELEPAX: (212) 751-6849
merry A2772
                                                                                                                                                                                       ADDRESSEE: Carol Talkington Verser, Ph.D. ADDRESSEE: Heska Corporation STREET: 1825 Sharp Point Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: amino acid
STRANDEDNESS: Unl
                                                                                   MEDIUM TYPE:
                                                                                                                                                             STREET: 1825 Sharp CITY: Fort Collins STATE: Colorado
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                                                                                                                                       U.S.A.
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Frank, Glenn R.
VENTION: MOVEL FILARIID NEMATODE CYSTEINE
VENTION: PROTEASE PROTEINS, NUCLEIC ACID MOLECULES AND USES
                                                                                                                                                                                                                                                                                                                                                                        Wisnewski, Nancy
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                                                                                                                                                                                                                                                                                   THEREOF
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US/08/482,282B
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Pred. No. 1.4e+05
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Query Match

69.0%;

Score 40;

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Length 72;

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; TOPOLOGY: linear; MOLECULE TYPE: protein US-08-486-036A-6
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INFORMATION FOR SEQ ID NO:
                                                                                              TELEFAX: (303) 863-02 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
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APPLICANT: Frank, Gl
TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                        COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: Patentin Release #1.0, CURRENT APPLICATION DATA:
                                                            SEQUENCE CHARACTERISTICS:
LENGTH: 72 amino acids
                                                                                                                                             TELECOMMUNICATION INFORMATION:
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MEDIUM TYPE: Floppy disk
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LENGTH: 72 amino acids
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CORRESPONDENCE ADDRESS:
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                                                                                                                                                                                                                         APPLICATION NUMBER: US/08/486,036A FILING DATE: June 7, 1995 CLASSIFICATION: 435
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME: Verser, Carol Talkington REGISTRATION NUMBER: 37,459 REFERENCE/DOCKET NUMBER: 2618-
                                                                                                                                                                       NAME: Connell, Gary
REGISTRATION NUMBER: 32,020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 07
CLASSIFICATION:
                                                                                                                                                              REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                            STATE:
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                                               amino acid
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)N: 435
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                                                                                                           863-0223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Cynthia A.
                                                                                                                              863-9700
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55.6%;
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Pred. No. 7
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                                                                                                                                                                                                                                                                                         Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 1;
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Best Local Similarity
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PCT-US96-09848-6
                                                                                                                                                                                      RESULT
                                                                                                                                                                      PCT-US96-09848-31
                                                                                                                                     Sequence 31, Application PC/TUS9609848 GENERAL INFORMATION:
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Matches 5; Conserv
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TELEFAX: (303) 863-0223
INFORMATION FOR SEQ ID NO: 6:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CLASSIFICATION:
CLASSIFICATION:
PRIOR APPLICATION NUMBER: US 08
FILING DATE: 07-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME: Connell, Gary J.
REGISTRATION NUMBER: 32,020
REFERENCE/DOCKET NUMBER: 26:
TELECOMMUNICATION INFORMATION:
TELEPHONE: (303) 863-9700
                                 CORRESPONDENCE ADDRESS:
                                                                 APPLICANT: Tripp, Cynthia A.
APPLICANT: Wisnewski, Nancy
TITLE OF INVENTION: NOVEL FILARTYD NEMATODE CYSTEINE
TITLE OF INVENTION: PROTEASE PROTEINS, NUCLEIC ACID I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 07-JUN-1995
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION:
TITLE OF INVENTION:
NUMBER OF SEQUENCES:
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                                                                                                                                                                                                                                                                                                                                                                                                             MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CURRENT APPLICATION DATA:
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ADDRESSEE: Sheridan Ross & McIntosh
                                                     NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
 STREET:
                                                                                                                                                                                                                                           30
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                 ADDRESSEE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY: U.S.A.
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Sheridan Ross & McIntosh
)0 Lincoln Street, Suite 3500
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55.6%;
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NOVEL FILARIID NEMATODE CYSTEINE
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Pred. No.
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                                                                 ACID MOLECULES AND USES THEREOF
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TELEFAX: (303) 863-0223
INFORMATION FOR SEQ ID NO: :
SEQUENCE CHARACTERISTICS:
LENGTH: 401 amino acids
                                   CLASSIFICATION:
PRIOR APPLICATION DATA:
PRIOR APPLICATION NUMBER: US 08/486,036
FILING DATE: 07-JUN-1995
ATTORNEY/AGENT INFORMATION:
NAME: Connell, Gary J.
                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US 08
FILING DATE: 07-JUN-1995
ATTORNEY AGENT INFORMATION:
NAME: Connell, Gary J.
REGISTRATION NUMBER: 32,0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION DATA: APPLICATION NUMBER: PC
                                                                                                                                                                                    CURRENT APPLICATION DATA:
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TELECOMMUNICATION INFORMATION:
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PRIOR APPLICATION DATA:
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                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES:
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                                                                                                                                                                                                   COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                         CITY: Denver
STATE: Colorado
COUNTRY: U.S.A.
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OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
                                                                                                                                                 APPLICATION NUMBER: FILING DATE:
                  NAME: Connell, Gary J. REGISTRATION NUMBER: 3
                                                                                                                                                                                                                                                                                                                                                                 STREET:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Wisnewski,
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PROTEASE PROTEINS, NUCLEIC ACID MOLECULES AND USES THEREOF
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55.6%;
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TELECOMMUNICATION INFORMATION:
TELEPHONE: (303) 863-9700
TELEFAX: (303) 863-9700
TELEFAX: (303) 863-9723
INFORMATION FOR SEQ ID NO: 15:
SEQUENCE CHARACTERISTICS:
LENGTH: 407 amino acids
TYPE: amino acids
TYPE: amino acids
TOPOLOGY: linear
COUCLE TYPE: protein
PCT-US96-09848-15

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Best Local Similarity 55.68; Pred. No. 42;
Matches 5; Conservative 3; Mismatches 1; Indels 0; Gaps
Watches 5; Conservative 3; Mismatches 0; Gaps
Oy 1 KTWGQYWAV 9
II:III:
Db 365 KTYGEYWII 373

Search completed: July 3, 2001, 10:22:35

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sp_vertebrate:*
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O9repl zymomonas m
O01737 caenorhabdi
O904y8 human papil
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P70874 bacillus ce
C95126 mus musculu
O43801 homo sapien
O75323 homo sapien
O9pu58 brachydanio
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Q9kpy3 vibrio chol
Q45818 chloroflexu
P74474 synechocyst
O02622 crassostrea
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01-MAY-2000
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062270 caenorhabdi	007068 burkholderi	087798 pseudomonas	Q9vnk6 drosophila	Q9rmh9 streptomyce	Q9f4v6 brevibacter	P97024 brevibacter	Q45279 brevibacter	$\sim$	Q9f176 arabidopsis	ຜ	4	C			Q9sdn4 prunus dulc	Q9zps2 arabidopsis	ct	xenopus	xenopus	٠.			Q9w6i6 brachydanio	Q9rmm4 streptomyce	008346 streptomyce

## ALIGNMENTS

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SIDUENCE FROM N.A.

SIMON J., Gross R., Einsle O., Kroneck P.M.H., Kroeger A., Klimmek Simon J., Gross R., Einsle O., Kroneck P.M.H., Kroeger A., Klimmek "A NapC/NirT-type cytochrome c (NrfH) is the mediator between the quinone pool and the cytochrome c nitrite reductase of Wolinella succinogenes.";

Submitted (AUG-1999) to the EMBL/GenBank/DDBJ databases.

EMBL; AUZ45540; CAB53161.1; -.

InterPro; IPR001064; -.

PROSITE; PS00225; CRYSTALLIN_BETAGAMMA; UNKNOWN_1.

SEQUENCE 902 AA; 102016 MW; D2621BF042288380 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Wolinella succinogenes.
Bacteria; Proteobacteria;
Wolinella.
 ) (TrEMBLrel.) (TrEMBLrel.)
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Pred. No. 74;
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Smythe M.L., Mc
"Proteolytic de
  CHAIN
SEQUENCE
                                          PROSITE;
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                                                                                                                                                                                                                                                                                                                             01-JAN-1998 (TrEMBLrel. 05, 01-JAN-1998 (TrEMBLrel. 05, 01-MAR-2001 (TrEMBLrel. 16,
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SEQUENCE
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Eukaryota; Fungi; Ascomy
Sordariomycetes incertae
                                                                       Pfam; PF00112; Peptidase_C1;
                                                                                                                                             Hola-Jamriska L.,
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                                 Hydrolase;
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                                                                                                                                    Brindley P.J.
                                                                                                                                                         STRAIN-CHINESE;
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KTFNQYWAI 88
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S; PR00911; GLHYDRLASE11.
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                            PS00139; THIOL_PROTEASE_CYS; PS00639; THIOL_PROTEASE_HIS; se; Signal; Thiol protease.
                                                              PR00705; PAPAIN.
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116 AA;
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Mcmanus D.P.;
degradation of host hemoglobin
: Parasitol. 89:1-9(1997).
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POTENTIAL.
CATHEPSIN C.
ADA9765666C4142C CRC64;
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Schistosomatidae;
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SEQUENCE FROM N.A.
STRAIN=EL TOR N16961 / SEROTYPE O1;
STRAIN=EL TOR N16961 / SEROTYPE O1;
MEDLINE=20406833; PubMed=10952301;
Heldelberg J.F., Eisen J.A., Nelson W.C., Clayton R.A., Gwinn M.L.
Dodson R.J., Haft D.H., Hickey E.K., Peterson J.D., Umayam L.A.,
Dodson R.J., Nelson K.E., Read T.D., Tettelin H., Richardson D.,
Gill S.R., Nelson K.E., Read T.D., Tettelin H., Dragoi I., Selle:
Ermolaeva M.D., Vamathevan J., Bass S., Oin H., Dragoi I., Selle:
The strain of the strain R.D., Nierman W.C., White
The strain of the strain R.D., Nierman W.C., White
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Q9KPY3;
01-OCT-2000
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Q9Y9N5;
01-NOV-1999
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"Complete genome sequence of an aerobic hyper-thermophilic
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425 SWGQYW 430
                                                                                                                                                       Vibrio cholerae.
Bacteria; Proteobacteria;
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01-MAR-2001 (TrEMBLrel.
276AA LONG HYPOTHETICAL
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Q45818;
Q1-NOV-1996
Q1-NOV-1996
Q1-MAR-2001
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EMBL; AE004294; AAF95373.1;
TIGR; VC2229; -.
SEQUENCE 281 AA; 31824 M
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Niedermeier G.
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Chloroflexaceae; Chloroflexus.
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Niedermeier G., Shiozawa J.A., Lottspeich
"The primary structure of two chlorosome p
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity 100. 5; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (MAY-1994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6 (TrEMBLrel. 01, Cre
6 (TrEMBLrel. 01, Las
1 (TrEMBLrel. 16, Las
AL 33.7 KDA PROTEIN (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             342:61-65(1994).
   250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 342:61-65(1994).
                                                                                                                Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FROM
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                                                                                                                                           69.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   the EMBL/GenBank/DDBJ
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                                                                                                                                                                                                                                                            ₩;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Last sequence up Last innotation IN (BCHGC).
                                                                                                             Score 40; DB; Pred. No. 51; 0; Mismatches
                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              chlorosome
                                                                                                                                                                                                                                                            F990F92F2D1C2B07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7CA75AD3494DFDD0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                     , Nakahara M., E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Chloroflexaceae group;
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51;
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47;
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proteins from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        proteins
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                                                                                                                                                                    Length 305
                                                                                                                                                                                                                                                                                                                                                                                                                                                           photosynthesis.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bauer C.E.;
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                                                                                                                                                                                                                                                            CRC64;
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from
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Best Local S
Matches 5
  CHAIN
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
SEQUENCE FROM N.A.
TISSUE-DIGESTIVE GLAND;
Paniel J.Y., Le
                                                                           Signal;
NON_TER
                                                                                                                                                                                                                                                    Submitted (SEP-1996) to the EMBL/GenBank/DDBJ databases.
-!- CATALYTIC ACTIVITY: ENDOHYDROLYSIS OF 1,4-ALPHA-GLUCOSIDIC LINKAGES IN OLIGOSACCHARIDES AND POLYASACCHARIDES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Crassostrea gigas (Pacific oyster).
Eukaryota; Metazoa; Mollusca; Bivalvia; Pteriomorphia; Ostreoida;
Ostreoidea; Ostreidae; Crassostrea.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-JUL-1997 (TrEMBLrel. 04, Created)
01-JUL-1997 (TrEMBLrel. 04, Last sequence update)
01-JUL-1997 (TREMBLREL. 15, Last annotation update)
01-OCT-2000 (TREMBLREL. 15, Last annotation update)
ALPHA-AMYLASE PRECURSOR (EC 3.2.1.1) (1,4-ALPHA-D-GLUCAN
GLUCANOHYDROLASE) (GLYCOGENASE) (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Synechocystis sp. strain PCC6803..II. Sequence determination of the entire genome and assignment of potential protein-coding regions."; DNA Res. 3:109-136(1996).
EMBL; D90915; BAA18575.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.

MEDLINE=97061201; PubMed=8905231;

Kaneko T., Sato S., Kotani H., Tanaka A., Asamizu E., Nakamura Y.,

Miyajima N., Hirosawa M., Sugiura M., Sasamoto S., Kimura T.,

Miyajima N., Hirosawa M., Sugiura M., Sasamoto S., Kimura T.,

Hosouchi T., Matsuno A., Muraki A., Nakazaki N., Naruo K., Okumura

Shimpo S., Takeuchi C., Wada T., Watanabe A., Yamada M., Yasuda M.,

Tabata S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Synechocystis sp. (strain Bacteria; Cyanobacteria; Cynobacteria; C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-FEB-1997 (TrEMBLrel. 02, Created)
01-FEB-1997 (TrEMBLrel. 02, Last sequence up
01-CCT-2000 (TrEMBLrel. 15, Last annotation
D-ALANYL-D-ALANINE CARBOXYPEPTIDASE.
                                                                                                                        Pfam; PF00128; alpha-amylase; 1. PRINTS; PR00110; ALPHAAMYLASE.
                                                                                                                                                                                                    EMBL; Y08370; CAA69658.1;
HSSP; P00690; 1JFH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ostreoidea; Ostreidae; NCBI_TaxID=29159;
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                                                     SIGNAL
                                                                                                                                                                                   InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          002622;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Sequence analysis of the genome of the unicellular cyanobacterium Synechocystis sp. strain PCC6803. II. Sequence determination of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     335 WGQYW 339
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                                                                                                                                                                                                                                                                                                                                    J.F.
                                                                                                   Hydrolase;
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                                                                                                                                                                              IPR000461; -.
  518
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                                19
  AA;
  18
518
57435
                                                                                                      Glycosidase.
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                                                                                                                                                                                                                                                                                                                                                             Moine S.,
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POTENTIAL.
ALPHA-AMYLASE.
; 2F3864914E7278AC CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 40;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               75510481820E462F CRC64;
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67;
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                                                                                                                                                                                                                                                                                                                                                             Wormhoudt A.,
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Matches
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01-NOV-1999
01-MAY-2000
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01-MAY-2000
01-MAY-2000
    STRAIN-BRISTOL N2;
Waterston R.;
Submitted (JUN-199
                                                                                                 Wilson R., Woessner J., Graves T.;
"The sequence of C. elegans cosmid F20H11.";
Submitted (MAY-1997) to the EMBL/GenBank/DDB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Receptor.
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                  Caenorhabditis elegans.
Eukaryota; Metazoa; Nemato
Rhabditidae; Peloderinae;
RCBI_TaxID=6239;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   001737
001737;
                                                                                                                                                               SEQUENCE FROM N.A.
STRAIN-BRISTOL N2;
                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
STRAIN=BRISTOL N2;
MEDLINE=99069613;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        UM H.W., Kang H.S.;

"Sequence analysis of 42B3 fosmid Submitted (DEC-1999) to the EMBL/C EMBL; AF213822; AAF23804.1; -.
                                                                  SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRAIN-ZM4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Zymomonas mobilis.
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                                                                                                                                                                                                                           "Genome sequence of the nemainvestigating biology. The C
Science 282:2012-2018(1998).
                                                                                                                                                                                                                               Science
                                                                                                                                                                                                                                                                                         None;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      F20H11.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=542;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FERRICHROME
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Q1-MAR-2001 (TrEMBLrel. 16
Q1-MAR-2001 (TrEMBLrel. 16
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Q1-MAR-2001 (TrEMBLrel. 16
MAJOR CAPSID PROTEIN L1 ()
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Q9EW89;
01-MAR-2001 (TrEMBLrel. 16, C:
01-MAR-2001 (TrEMBLrel. 16, L:
01-MAR-2001 (TrEMBLrel. 16, L:
BETA-XYLANASE (EC 3.2.1.8) (FI
EMBL;
Xylan
                Zhang H., Yao B., Wang Y.;
"Cloning and expression of the 23kD beta-xylar
Streptomyces olivaceoviridis E-86.";
Submitted (DEC-2000) to the EMBL/GenBank/DDBJ
EMBL; AJ292317; CAC19491.1;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Antonsson A., Hossain S., Simon M., "Skin HPV found on foreheads."; Submitted (CCT-2000) to the EMBL/Ger EMBL; AY009882; AAG27044.1; -..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human papillomavirus.
Viruses; dsDNA viruses,
Papillomavirus.
PROBI_TaxID=10566;
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|||:||
572 WGQFWA 577
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                                                                                                                       STRAIN-E-86;
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STRAIN-E-86;
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42 WGEYWDV 48
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Pred. No. 17;
1; Mismatches
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Pred. No. 2.5e
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HSSP; P09850; LANC.

InterPro; IPR001137; -...

R Pfam; PF00457; Glyco_hydro_11; 1.

R PFINTS; PR00911; GLHYDRLASE11.

JR PROSITE; PS00776; GLYCOSYL_HYDROL_F11_1; 1.

DR PROSITE; PS00777; GLYCOSYL_HYDROL_F11_2; 1.

DR PROSITE; PS00777; GLYCOSYL_HYDROL_F11_2; 1.

DR PROSITE; PS00777; GLYCOSYL_HYDROL_F11_2; 1.

DR WY Xylan degradation; Hydrolase; Glycosidase.

EMD0-1.4-BETA-XYLANASE.

39 27443 MW; EAA15233052E74AA CRC64;
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Q59962;
01-NOV-1996
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EMBL; X98518; CAA67143.1; -
HSSP; P09850; IXNB.
                                                                                                                                                                                                                                                                                                                                     Q9RXG5 PRELIMINARY; PRT; 236 AA.
Q9RXG5;
Q9RXG5;
Q1-MAY-2000 (TrEMBLrel. 13, Created)
Q1-MAY-2000 (TrEMBLrel. 13, Last sequence update)
Q1-MAR-2001 (TrEMBLrel. 16, Last annotation update)
CYTOCHROME C-TYPE BIOGENESIS PROTEIN, HEME EXPORTER
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01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-OCT-2000 (TrEMBLrel. 15, Last annotation update)
ENDO-1,4-BETA-XYLANASE (EC 3.2.1.8) (1,4-BETA-D-XYLAN
MEDLINE=20036896; PubMed=10567266; White O., Eisen J.A., Heidelberg J.: Dodson R.J., Haft D.H., Gwinn M.L.,
                                                                                                                                                                                                    Bacteria; Thermus/Deinococcus
NCBI_TaxID=1299;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=1931;
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                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                      Deinococcus radiodurans
                                                                                                                                                                                                                                                                                                             DR0348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Georis J.C.E.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRAIN-S38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Streptomyces
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               XYLANOHYDROLASE).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  169
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 KTWGQYWAV 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      13
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KTFNQYWSV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
6; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity 6; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Streptomycineae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         66.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         . 78;
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Pred. No. 55;
2; Mismatches
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Pred.
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                                   J.F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         39;
       Nelson
                                                                                                                                                                                                                                       Deinococcales;
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   Hickey E.K.,
lson W.C., Ri
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB
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       Richardson
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                                   Peterson
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   D.L.,
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                                                DOMAIN
SEQUENCE
                                                                          CHAIN
DOMAIN
DOMAIN
REPEAT
                                                                                                                                                                          STRAIN=IFO 1359/;
MEDLINE=96359394; PubMed=8752358;
Moriyama R., Kudoh S., Miyata S., Nonobe S., Hattori A., Makino
"A germination-specific spore cortex-lytic enzyme from Bacillus
"A germination-specific spore cortex-lytic enzyme from Bacillus
                                                                                                                                                                                                                                                                                                                                                      01-FEB-1997 (TrEMBLrel. 02, Created)
01-FEB-1997 (TrEMBLrel. 02, Last sequence update)
01-FEB-1997 (TrEMBLrel. 16, Last annotation update)
01-MAR-2001 (TrEMBLrel. 16, Last annotation update)
SPORE CORTEX-LYTIC ENZYME PREPERTIDE PRECURSOR (GERMINATION-SPECIFIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro; IPR003557; -.
Pfam; PF01578; CytC_asm; 1.
PRINTS; PR01386; CCMCBIOGNSIS.
SEQUENCE 236 AA; 26591 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           radiodurans R1.";
Science 286:1571-1577(1999).
EMBL; AEO01895; AAF09930.1;
TIGR; DR0348; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Moffat K.S., Qin H., Jiang L., Pamphile W., Crosby M., Shen M., Vamathevan J.J., Lam P., McDonald L., Hiterback T., Zalewski C., Makarova K.S., Aravind L., Daly M.J., Minton K.W., Fleischmann R. Ketchum K.A., Nelson K.E., Salzberg S., Smith H.O., Venter J.C.,
                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.,
                                                                                                                                                                                                                                                                                             Bacillus/Staphylococcus
NCBI_TaxID=1396;
                                                                                                                                                                                                                                                                                                                 Bacteria; Firmicutes;
                                                                                                                                                                                                                                                                                                                           Bacillus
                                                                                                                                                                                                                                                                                                                                                                                    P70874;
01-FEB-1997
                                                                                                                   SIGNAL
                                                                                                                           Hydrolase;
                                                                                                                                       Pfam;
                                                                                                                                                       EMBL; D63645; BAA09800.1;
                                                                                                                                                                                                                                                                                                                                     SLEB
                                                                                                                                                                                                                                                                                                                                             AMIDASE)
                                                                                                                                                                                                                                                                                                                                                                                                       P70874
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Fraser C.M.;
                                                                   REPEAT
                                                                                                                                                InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       101
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                                                                                                                                                                 SUBCELLULAR LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TWGQYW 7
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                                                                                                                                     PF01471; PG_binding_1;
 Similarity
5; Conser
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                                                                                                                                              IPR002477;
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65
65
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259
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                                                                                                                                                                                                                                                                                                                                                                                                       PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                            l wall;
                                                 AA;
                                            32
259
100
96
72
96
223
28257
                                                                                                                                                                                                                                                                            AND SEQUENCE
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83.3%;
         67.2%;
                                                                                                                                                                                                                                                                                                         Bacillus/Clostridium us group; Bacillus.
                                                                                                                           Signal;
                                                                                                                                                                                                                                                                                                        group;
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                                                                                                                                                                  SPORE-BOUND
Score 39; DB Pred. No. 62; 1; Mismatches
                                                                                                                 , 1.
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Pred.
                                                                              SPORE-CORTEX-LYTIC ENZYME.

MOTIF A.

2 X 8 AA APPROXIMATE REPEZ

1.
                                                MOTIF B.
36F266D32EDA544E
                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
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                                                                                                                                                                                                                                                                           33-52;
                                                                                                                                                                                                                                                                                                                                                                                                        259
                                                                                      APPROXIMATE REPEATS
        DB
62;
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57;
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                  Length 259;
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                                                 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Deinococcus
                                                                                                                                                                                                                                                                            83-94
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O1-JUN-1998 (TremBLrel. C
O1-JUN-1998 (TremBLrel. C
O1-MAY-2000 (TremBLrel. 1
NIPSNAP2 PROTEIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.

Seroussi E., Pan H.Q., Kedra I Submitted (AUG-1997) to the ENEMBL; AJ001261; CAA04635.1; -. MGD; MGI:1278343; Gbas.

SEQUENCE 281 AA; 32932 MW;
075323
075323;
01-NOV-1998
01-NOV-1998
                                                                                                                                                                                                                                                                                                                                                 Seroussi E., Pan H.Q., Kedra
Submitted (AUG-1997) to the
EMBL; AJ001259; CAA0463.1;
InterPro; IPR001066; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      055126
055126;
                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens (Human).
Eukaryota; Metazoa; C
Mammalia; Eutheria; F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-JUN-1998 (TrEMBLrel.
01-JUN-1998 (TrEMBLrel.
01-NOV-1999 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NIPSNAP2
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01-NOV-1999 (TrembLrel. 12, Last annotation update)
4-NITROPHENYLPHOSPHATASE DOMAIN AND NON-NEURONAL SNAP25-LIKE PROTEIN
                                                                                                                                                                                                                                                                                                                                             InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=9606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=10090;
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5; Conser
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PS00216; SUGAR_TRANSPORT_1; UNKNOWN_1.
285 AA; 33769 MW; B83CD282EA759D2D
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 (TrEMBLrel.
                                                      PRELIMINARY;
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Primates;
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Pred No. 68;
0; Mismatches
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EMBL/GenBank/DDBJ databases
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EMBL/GenBank/DDBJ databases
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Last sequence update)
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Last annotation updat
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                                                                                                                                                                                                                   Pred. No. 69;
); Mismatches
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Q9PU58
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Best Local S
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O08346 PRELIMINARY; PRT; 335 AA.
O08346;
O1-JUL-1997 (TrEMBLrel. 04, Created)
O1-JUL-1997 (TrEMBLrel. 04, Last sequence update)
O1-MAR-2001 (TrEMBLrel. 16, Last annotation update)
XYLANASE PRECURSOR (EC 3.2.1.8) (ENDO-1,4-BETA-XYLANASE) (1,4-BETA-D-XYLAN XYLANOHYDROLASE).
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01-MAY-2000 (TrEMBLrel. 13, C
01-MAY-2000 (TrEMBLrel. 13, I
01-MAR-2001 (TrEMBLrel. 16, I
NIPSNAP2 PROTEIN (FRAGMENT).
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SEQUENCE
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EMBL; AF029786; AAC29002.1; -
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Homo sapiens (Human).

Eukaryota; Metazoa; Chordata;

Mammalia; Eutheria; Primates;

NCBI_TaxID=9606;
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GBAS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Submitted (SEP-1999) to the EMBL; AJ249797; CAB56702.1; InterPro; IPR001781; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Brachydanio rerio (Zebrafish) (Zebra danio).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Actinopterygii; Neopterygii; Teleostei; Euteleostei;
Cypriniformes; Cyprinidae; Rasborinae; Danio.
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MEDLINE=98277458; PubMed=9615231;
Wang_X.Y., Smith D.I., Liu W., Ja
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro; IPKUUL.....
ProDom; PD000094; -; 1.
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Catarrhini;
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co-amplified with EGFR.";
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Q9RMM4;
01-MAY-2000 (TrEMBLrel. 1:
01-MAY-2001 (TrEMBLrel. 1:
01-MAR-2001 (TrEMBLrel. 1:
XYLANASE B PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                      "Streptomyces thermocyaneoviolaceus xynB (xylanase B)."; Submitted (CCT-1999) to the EMBL/GenBank/DDBJ databases. EMBL; AF194025; AAF04601.1; -...HSBP; P09850; INNB.
                                                                                                                                                                                                                      Interpro; IPRO01137; ...

Pfam; pF00457; Glyco_hydro_11; 1.

PRO115; PRO0911; GLHYDRLASE11.

PROSITE; PS00776; GLYCOSYL_HYDROL_F11_1; 1.

PROSITE; PS00777; GLYCOSYL_HYDROL_F11_2; 1.

Signal; Xylan degradation; Hydrolase; Glycosisignal; Xylan degr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Streptomyces thermocyaneoviolaceus.
Bacteria; Firmicutes; Actinobacteri
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SEQUENCE
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PROSITE; PS00777; GLYCOSYL_HYDROL_F11_2; 1.
Signal; Xylan degradation; Hydrolase; Glycosidase.
SIGNAL 1 29 POTENTIAL.
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-i- CATALYTIC ACTIVITY: ENDOHYDROLYSIS OF 1,4-BETA-D-XYLOSIDIC
                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Actinomycetales; S
NCBI_TaxID=106355;
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Pfam; PF00457; Glyco_hydro_11;
PRINTS; PR00911; GLHYDRLASE11.
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EMBL; D85897; BAA19778.1; -.
HSSP; P09850; 1XNB.
                                                                                                                                                                                            CHAIN
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Tsujibo H., Ohtsuki T., Iio T., Yamazaki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
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Bacteria; Firmicutes; Actinobacteria; Actinobacteridae;
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h 67.:
Similarity 66.:
6; Conservative
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335 AA;
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35280 MW;
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35328
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16,
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Score 39; DB
Pred No. 81;
2; Mismatches
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Last ann
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                                                                                                                                                        XYLANASE B.
D7DED7BAFCB52710 CRC64;
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Streptomycetaceae; Streptomyces.
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RESULT
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Q9W6I6
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DRR REPRESENTATION
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Best Local
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01-MAY-2000
01-MAY-2000
01-MAR-2001
                                                         Thisse C., Thisse B.;
Thisse C., Thisse B.;
"Antivin, a novel and divergent member of negatively regulates mesoderm induction.";
Development 126:229-240(1999).
Development T26:229-240(1991).
                                                                                                                                                                                                                    Brachydanio rerio (Zebrafish) (Zebra dar
Eukaryota; Metazoa; Chordata; Craniata;
Actinopterygii; Neopterygii; Teleostei;
Cypriniformes; Cyprinidae; Rasborinae; Cyprinidae; Cy
                                                                                                                                                                                                                                                                                                                                                                                                          Q9PW55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pfam; PF00019; TGF-beta; 1.
Pfam; PF00688; TGFb_propeptide;
ProDom; PD000357; -; 1.
PROSITE; PS00250; TGF BETA; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     signaling in the midline.";
submitted (MAR-1999) to the EMBI
-- SIMILARITY: TO TRANSFORMING
EMBL; AF132444; AAD34388.1; --
HSSP, P01137; IKLA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Brachydanio rerio (Zebrafish)
Eukaryota; Metazoa; Chordata;
Actinopterygii; Neopterygii; T
Cypriniformes; Cyprinidae; Ras
NCBI_TaxID=7955;
               EMBL; AF172089; AAD47114.1; HSSP; P01137; 1KLA. InterPro; IPR0011111; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A. Bisgrove B.W., Essne "Regulation of axis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-NOV-1999 (TrEMBLrel. 1:
01-NOV-1999 (TrEMBLrel. 1:
01-MAR-2001 (TrEMBLrel. 1:
SIGNALING MOLECULE LEFTY1
                                                                                                                                                              SEQUENCE FROM N.A.
MEDLINE-99065494;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Glycoprotein.
SEQUENCE 35
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0 (TrEMBLrel. )
1 (TrEMBLrel. )
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                                                                                                                                                                PubMed=9847237;
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ta; Craniata; Vertebrata; !
i; Teleostei; Euteleostei;
Rasborinae; Danio.
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oment by anta
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MING GROWTH FACTOR
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Last annotation updat
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86;
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Ostariophysi;
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Matches 5
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                                                                          Q9DFC6;
Q9DFC6;
Q1-MAR-2001;
01-MAR-2001;
01-MAR-2001;
                              01-MAR-2001 (TrEMBLrel. 16, Created)
01-MAR-2001 (TrEMBLrel. 16, Last sequence v
01-MAR-2001 (TrEMBLrel. 16, Last annotation
TGF-BETA FAMILY MEMBER LEFTY-A.
Xenopus laevis (African clawed frog).
Eukaryota, Metazoa; Chordata; Craniata; Ver
Amphibia; Batrachia; Anura; Mesobatrachia;
                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
Bisgrove B.W., Essner J.J., Yost H.J.;
Bisgrove B.W., Essner J.J., Yost H.J.;
"Regulation of axis development by antagonism signaling in the midline.";
Submitted (MAR-1999) to the EMBL/GenBank/DDBJ-I-SIMILARITY: TO TRANSFORMING GROWTH FACTOR EMBL, AF132445, AAD34389.1; -.
HSSP; P08112; 27GI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pfam; PF00019; TGF-beta; 1.
Pfam; PF00688; TGFb_propeptide;
PROSITE; PS00250; TGF_BETA; 1.
SMART; SM00204; TGFB; 1.
Glycoprotein.
SEQUENCE 358 AA; 41041 MW;
            NCBI_TaxID-8355,
                     Xenopodinae; Xenopus
                                                                                                                                                                                                                                                                                                                   Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Brachydanio rerio (Zebrafish) (Zebra danio).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; I
Actinopterygii; Neopterygii; Teleostei; Euteleostei;
Cypriniformes; Cyprinidae; Rasborinae; Danio.
NCBI_TaxID-7955;
                                                                                                                                                                                                                                                                                           SMART; SM00204; TGFB;
                                                                                                                                                                                                                                                                                                                             Pfam;
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                                                                                                                                                                                                                                                                                                          PROSITE;
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PF00688; TGFb_propeptide;
PE; PS00250; TGF_BETA; 1.
                                                                                                                                                                                                                    Similarity 5; Conserv
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IPR001111; -.
                                                                                                                                                                                                                                                                         362 AA;
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62.5%;
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                                                                        Created)
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                                                                                                                      PRT;
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SEQUENCE FROM N.A.

MEDLINE-20341055; PubMed-10882517;

Branford W.W., Essner J.J., Yost H.J.;

Branford W.W., Essner J.J., Yost H.J.;

Regulation of gut and heart left-right as interactions between Xenopus lefty and BMP Dev. Biol. 223:291-306(2000).

EMBL; AF283563; AAG10035.1; -

SEQUENCE 367 AA; 41604 MW; DBA7E85752B
SEQUENCE FROM N.A.
PubMed=11091069;
Tanegashima K., Vokota C., Takahashi S., Asashima M.;
Tanegashima K. of Xantivin, a Xenopus lefty/antivin-related involved in the regulation of activin signaling during mesoderm induction.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q9DFC5,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE-20341055; PubMed-10882517; Branford W.W., Essner J.J., Yost H.J.; "Regulation of gut and heart left-right interactions between Xenopus lefty and B Dev. Blol. 223:291-306(2000).
EMBL; AF283562; AA610034 l; -
SEQUENCE 366 AA; 41434 MW; E65CEC306
                                                                                                                                                                 01-MAR-2001
01-MAR-2001
                                                                                                                                                                                                             Q9DD36
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                                                                               Xenopodinae; Xenopus
NCBI_TaxID=8355;
                                                                                                      Eukaryota; Metazoa; Chordata;
Amphibia; Batrachia; Anura; M
                                                                                                                                                                                       01-MAR-2001
                                                                                                                                                                                                   Q9DD36;
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Eukaryota; Metazoa; Chordata; Craniata; Ven
Amphibia; Batrachia; Anura; Mesobatrachia;
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                                                                                                                             Xenopus laevis (African clawed frog)
                                                                                                                                                    XANTIVIN (LEFTY-RELATED
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NCBI_TaxID=8355;
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62.5%;
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16, Last sequence update)
16, Last annotation update
FACTOR XATV).
                                                                                                      a; Craniata; Ve
Mesobatrachia;
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BMP4 signaling.";
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la; Pipoidea;
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BMP4 signaling.";
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050200;
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01-JUN-1998
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AMYLASE (EC
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Development 0:0-0(2000).
EMBL; AB038010; BAB12725.1; -.
EMBL; AF209744; AAG35771.1; -.
SEQUENCE 367 AA; 41504 MW; F
                                                                                                                                                                         O9ZPS2
O9ZPS2;
OPERATION OF THE MAY-1999 (TrEMBLrel. 10, Created)
O1-MAY-1999 (TrEMBLrel. 10, Last sequence update)
O1-OCT-2000 (TrEMBLrel. 15, Last annotation update)
PUTATIVE OLIGOPEPTIDE TRANSPORT PROTEIN.
E14H20 9.
Arabidopsis thaliana (Mouse-ear cress).
                                 Eukaryota; Viridiplantae; Embryophyta; Trachec Magnoliophyta; eudicoty!edons; core eudicots; Brassicales; Brassicaceae; Arabidopsis. NCBI_TaxID=3702;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Jones R.A., Patel B., Beacham I.R.;
Submitted (AUG-1997) to the EMBL/GenBank/DDBJ databases.
-!- CATALYTIC ACTIVITY: ENDOHYDROLYSIS OF 1,4-ALPHA-GLUCOSIDIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The lefty-related
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pfam; PF00128; alpha-amylase;
Hydrolase; Glycosidase.
SEQUENCE 469 AA; 52756 MW;
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(TrEMBLrel. 15, Last annotation update)
3.2.1.1) (ALPHA-AMYLASE) (1,4-ALPHA-D-GLUCAN
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as a feedback inhibitor of nodal
L-R axis development in Xenopus.";
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                                                                                                         Tracheophyta; S
dicots; Rosidae;
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Campalans A., Pages M. Messeguer R.;
Tidentification of differentially expressed genes during dehydration
in almond (Prunus amygdalus) using the cDNA-AFLP technique.";
Submitted (DEC-1999) to the EMBL/GenBank/DDBJ databases.
EMBL; AF21336; AAF20002.1; -
InterPro; IPR000109; -
Pfam; PF00854; PTR2; 1.
PROSITE; PS01022; PTR2-1; 1.
PROSITE; PS01023; PTR2-1; 1.
PROSITE; PS01023; PTR2-2; 1.
SEQUENCE 559 AA; 61604 MW; AAB9D08BD085C9A3 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Lin X., Kaul S., Shea T.P., Fujii C.Y., Shen M., VanAken S.E., Barnstead M.E., Mason T.M., Bowman C.L., Ronning C.M., Benito M., Carrera A.J., Creasy T.H., Buell C.R., Town C.D., Nierman W.C., Fraser C.M., Venter J.C.;

"Arabidopsis thaliana chromosome II BAC F14H20 genomic sequence.";

"Marabidopsis thaliana chromosome II BAC F14H20 databases.

"Bubmitted (MAR-1999) to the EMBL/GenBank/DDBJ databases.

EMBL; AC006532; AAD20094.1; -.

InterPro: IPR000109; -.

Pfam; PF00854; PTR2; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                              Prunus dulcis (Almond) (Prunus amygdalus).
Eukaryota; Viridiplantae; Embryophyta; Tracheophyta; Spermatophyta;
Magnoliophyta; eudicotyledons; core eudicots; Rosidae; eurosids I;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-UUN-2000 (TrEMBLrel. 14, Last annotation update)
AMINO ACID/PEPTIDE TRANSPORTER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A. STRAIN=CV. COLUMBIA; Lin X., Kaul S., She
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PROSITE; PS01023; PTR2_2; UNKNOWN_1.

SEQUENCE 545 AA; 60879 MW; E69740E3A53FEA5F CRC64;
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re greater than or equal to the score of the result being printed,
is derived by analysis of the total score distribution.
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cytochrome c-type	cytochrome c-type	cytochrome c-type	hypothetical prote	probable cytochrom	probable cytochrom	hypothetical prote	cytochrome c-type	cytochrome c-type	cytochrome c-type	cysQ protein VC272	cytochrome c-type	endo-1,4-beta-xyla	endo-1,4-beta-xyla	probable cytochrom	cytochrome c bioge

## ALIGNMENTS

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melanocyte-specific protein Pmel-17 precursor - human
C;Species: Homo sapiens (man)
C;Date: 19-Jun-1992 #sequence_revision 19-Jun-1992 #text_change 30-Sep-1993
C;Accession: A41234
R;Kwon, B.S.; Chintamaneni, C.; Kozak, C.A.; Copeland, N.G.; Gilbert, D.J.;
Proc. Natl. Acad. Sci. U.S.A. 88, 9228-9232, 1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Molecule type: mRNA
A; Residues: 1-592,594-662 < ADE>
A; Residues: 1-592,594-662 < ADE>
A; Cross-references: GB:S73003; NID:g639589; PIDN:AAC60634.1; PID:g639590
R; Kawakami, Y.; Eliyahu, S.; Delgado, C.H.; Robbins, P.F.; Sakaguchi, K.; Appella, Froc. Natl. Acad. Sci. U.S.A. 91, 6458-6462, 1994
A; Title: Identification of a human melanoma antigen recognized by tumor-infiltrating A; Reference number: A55753; MUID:94294401
A; Accession: A55753
A; Status: nucleic acid sequence not shown; not compared with conceptual translation A; Status: nucleic acid sequence not shown; not compared with conceptual translation
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C;Date: 01-Nov-1996 #sequence_revision 01-Nov-1996 #text_change 01-Dec-2000
C;Accession: 138400; A53668; A55753
R;Maresh, G.A.; Marken, J.S.; Neubauer, M.; Aruffo, A.; Hellstrom, I.; Hells
DNA Cell Biol. 13, 87-95, 1994
A;Title: Cloning and expression of the gene for the Melanoma-Associated ME20
A;Reference number: 138400; MUID:94235165
A;Accession: 138400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Molecule type: mRNA
A;Residues: 1-161;'F',163-592,594-662 <KAW>
C;Keywords: glycoprotein
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R;Adema, G.J.; de Boer, A.J.; V9gel, A.M.; Loenen, W.A.M.; Figdor, C.G.
J. Biol. Chem. 269, 20126-2013, 1994
A;Title: Molecular characterization of the melanocyte lineage-specific antigen gp100.
A;Reference number: A53668; MUID:94327568
A;Accession: A53668
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A; Residues: 1-662 <RES>
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N;Alternate names: melanoma antigen 25
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B.S.; Chintamaneni, C.; Kozak, C.A.; Copeland, N.G.; Gilbert, D.J.; Jenkins, atl. Acad. Sci. U.S.A. 88, 9228-9232, 1991
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A.; Ehrlich, S.D.; Emmerson, P.T.; Entian, K.D.; Errington, J.; Fabret, C.; Ferrari, E. Nature 390, 249-256, 1997

A;Authors: Foulger, D.; Fritz, C.; Fujita, M.; Fujita, Y.; Fuma, S.; Galizzi, A.; Galler iech, J.; Harwood, C.R.; Henaut, A.; Hilbert, H.; Holsappel, S.; Hosono, S.; Hullo, M.F.; Koetter, P.; Koningstein, G.; Krogh, S.; Kumano, M.; Kurita, K.; Lapidus, A.; Lardinois, A;Authors: Lauber, J.; Lazarevic, V.; Lee, S.M.; Levine, A.; Liu, H.; Masuda, S.; Maueel Y., M.; Ogawa, K.; Ogiwara, A.; Oudega, B.; Park, S.H.; Parro, V.; Pohl, T.M.; Portetelle, Y. M.; Gayawa, K.; Ogiwara, A.; Oudega, B.; Park, S.H.; Parro, V.; Pohl, T.M.; Portetelle, A.; Authors: Schleich, S.; Schroeter, R.; Scoffone, F.; Sekiguchi, J.; Sekowska, A.; Seron akeuchi, M.; Tamakoshi, A.; Tanaka, T.; Terpstra, P.; Tognoni, A.; Tosato, V.; Uchiyama, A.; Authors: Yoshikawa, H.F.; Zumstein, E.; Yoshikawa, H.; Zumstein, E.; Yoshikawa, H.; Danchin, A.; A; Heference number: A69580; MUID:98044033

A; Attension: C69708

A; Attension: C69708
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A;Title: Mouse silver mutation is caused by a single base insertion in the putative cyto A;Reference number: S53871; MUID:95175358

A;Accession: S53871
A;Cross-references: GB:Z99115; GB:Z99116; GB:AL009126; NID:g2634723; A;Experimental source: strain 168 R;Moriyama, R.; Hattori, A.; Miyata, S.; Kudoh, S.; Makino, S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          R;Kunst, F.; Ogasawara, N.; Moszer, I.; Albertini, A.M.; Alloni, G.; Azevedo, V.; Berter C.; Bron, S.; Brouillet, S.; Bruschi, C.V.; Caldwell, B.; Capuano, V.; Carter, N.M.; Chc C.; Bron, S.D.; Emmerson, P.T.; Entian, K.D.; Errington, J.; Fabret, C.; Ferrari, E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            spore cortex lytic enzyme prepeptide [imported] - Bacillus subtilis C;Species: Bacillus subtilis C;Date: 05-Dec-1997 #sequence_revision 05-Dec-1997 #text_change 21-Jul-2000 C;Accession: C69708; T44770
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C:Species: Mus musculus (house mouse)
C:Date: 27-Oct-1995 #sequence_revision 03-Nov-1995 #text_change 05-Nov-1999
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                                                                                 A; Molecule type: DNA
A; Residues: 1-305 < KUN>
                                                                                                                                 A; Status: preliminary; nucleic acid
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A; Molecule type: mRNA
A; Residues: 1-626 <KWO>
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A; Residues: 1-668 < KWO>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Cross-references: GB:U14133; NID:g887940;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
Matches 7
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Best Local S
Matches 8
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8; Conser
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77.8%;
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Pred. No. 3.4;
1; Mismatches
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Pred. No.
                                                                                                                                    sequence not shown; translation not shown
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0.89;
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                                                        PIDN:CAB14225.1; P.
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                                                                                                                                                                                                              A;Title: Genome sequence of A;Reference number: A85480; A;Accession: H85861
                                                                                                                                                                                                                                                                               iller, L.; Grotbeck, E.J.; Davis, N.W.; Lim, A.; Dimalanta, Nature 409, 529-533, 2001
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                                                                               A;Cross-references: GB:AE005174; NID:g12516559; PIDN:AAG57356.1; A;Experimental source: strain O157:H7, substrain EDL933
                                                                                                                                 A; Molecule type: DNA
A; Residues: 1-264 <STO>
                                                                                                                                                                                       A; Status: preliminary
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243

ETWGNYWS

250

enterohemorrhagic Escherichia MUID:21074935; PMID:11206551

Glasner, anta, E.;

J.D.; Rose, Potamousis,

D.J.; May K.; Apoda

coli 0157:H7

GSPDB:GN00145;

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cytochrome c-type synthesis protein homolog - Chlorella vulgaris chloroplast Cytochrome c-type synthesis protein homolog - Chlorella vulgaris chloroplast Cytorella vulgaris chloroplast Cytorella vulgaris - Cytorella vul
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Status: translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 1-315 <WAK>
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Best Local Similarity
Watches 6; Conserv
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A; Cross-references: EMB
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                                                                                                                                                                                                                                                                                                                                                                                                                   C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Cross-references:
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nes 5; Conserv
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1 KTWGQYWA
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                                                                                                             72.48;
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85.7%;
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Pred. No.
                                                                          2;
                                                                                                             Score 42;
Pred. No.
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                                                                          Mismatches
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                                                                          Indels
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A;Status; r.c...
A;Molecule type: DNA
A;Residues: 1-281 <HEI>
A;Cross-references: GB:AE004294;
A;Cross-references: serogroup
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A82104
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A; Molecule type: DNA
A; Residues: 1-276 < KAM>
A; Cross-references: DDBJ: AP000064;
A; Cross-references: DDBJ: AP000064;
A; Cross-references: STrain K1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      K;Nawarabayasi, Y.; Hino, Y.; Horikawa, H.; Yamazaki, S.; awa, H.; Takamiya, M.; Masuda, S.; Funahashi, T.; Tanaka, DNA Res. 6, 83-101, 1999
                                                                                                                             A; Map position: 1
C; Superfamily: hypothetical protein HI1037
                                                                                                                                                                                                                                                                                                                                      R; Heidelberg, J.F.; Eisen, J.A.; Nelson, W.C.; chardson, D.; Ermolaeva, M.D.; Vamathevan, J.;
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C;Species: Aeropyrum pernix
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                                                                                                                                                             A; Gene: VC2229
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Best Local
                                                                       Query Match
Best Local
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WGQYW 103
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                                                                     Score 40;
Pred. No.
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37;
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T.; Kudoh, Y.
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H.; Dragoi,
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Y.; Yamazaki,
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C; Date:
C; Access
R;Blattner, F.R.; Plunkett III, G.; Bloch, C.A.; Peri
A.; Rose, D.J.; Mau, B.; Shao, Y.
Science 277, 1453-1462, 1997
A;Title: The complete genome sequence of Escherichia
A;Reference number: A64720; MUID:97426617
A;Accession: H64992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C;Species: Chloroflexus aurantiacus
C;Date: 10-Sep-1999 #sequence_revision
C;Accession: S52775
                                                                                                            hypothetical protein b2226 - Escherichia coli (strain K-12) C;Species: Escherichia coli C;Species: Escherichia coli C;Date: 12-Sep-1997 #sequence_revision 17-Sep-1997 #text_ch C;Accession: H64992
                                                                                                                                                                                                                                                                                                                                                                                                                     A; Molecule type: DNA
A; Residues: 1-400 <KAN>
A; Cross-references: EMBI
A; Note: the nucleotide:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Variety: PCC 6803
C; Date: 25-Apr-1997 #sequence_revision
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Status: preliminary
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A; Accession: S76446
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A; Title: Sequence
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R; Kaneko, T.; Sato, S.; Kotani,
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A; Residues: 1-305 <NIE>
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C; Species: Synechocystis
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Best Local Si
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A Res. 3, 109–136, 1996
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Takeuchi, C.; Wada, T.; Watanabe, A.; Yamada, M.; Ya
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Pred. No.
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                                       coli K-12
                                                                                          Burland, V.; Riley,
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Yas

preliminary; nucleic acid sequence not shown;

translation

not shown

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C;Date: 12-Sep-1997 #sequence_revision 17-Sep-1997 #text_change C;Accession: F64844
R;Blattner, F.R.; Plunkett III, G; Bloch, C.A.; Perna, N.T.; Bu A; Rose, D.J.; Mau, B.; Shao, Y.
Science 277, 1453-1462, 1997
A;Title: The complete genome sequence of Escherichia coli K-12.
A;Reference number: A64720; MUID:97426617
A;Accession: F64844
                                                                  A; Gene: ycdS
C; Superfamily:
                                                                                                                                                                                                       A;Title: Genome sequence of enterohemorrhagic Escherichia A;Reference number: A85480; MUID:21074935; PMID:11206551 A;Accession: F85647
                                                                                                                                                                                                                                                                                                                         probable outer membrane protein ycdS [imported] - Escherichia coli (strain 0157:H7)
C;Species: Escherichia coli
C;Date: 16-Feb-2001 #sequence_revision 16-Feb-2001 #text_change 31-Mar-2001
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                                                                                                                   A;Cross-references: GB:AE005174; NID:g12514389; A;Experimental source: strain O157:H7, substrain
                                                                                                                                                     A; Molecule type: DNA
A; Residues: 1-807 <STO>
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R; Perna, N.T.; Plunkett III,
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F85647
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A;Experimental source: strain K-12, substrain MG1655
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A; Residues: 1-807 <BLAT>
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C;Species: Escherichia coli
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A; Residues: 1-549 <BLAT>
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Best Local Similarity
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100.0%; Pr
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100.0%;
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avis, N.W.; Lim, A.; Dimalanta,
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0; Mismatches
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97;
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68;
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97;
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imalanta, E.;
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hypothetical protein Rv00
C; Species: Mycobacterium
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. M.; Shen, M.; Vamathevan, J.
S.; Smith, H.O.; Venter, J.C.;
Science 286, 1571-1577, 1999
A;Title: Genome sequence of th
A; Reference number: A75250; MU
A; Accession: A75530
                                                                                                                                                                                                                                                                                                                                                                      C;Accession: A75530
C;Accession: A75530
R;White, O.; Eisen, J.A.; Heidelberg, J.F.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Cross-references: EMBL:X77333; NID:g535080; PIDN:CAA54547.1; PID:g535081
A;Experimental source: cultivar DUN
C;Keywords: light-harvesting complex
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             R;LaRoche, J.; Henry, D.; Wyman, K.; Sukenik, A.; Falkowski, Plant Mol. Biol. 25, 355-368, 1994
A;Title: Cloning and nucleotide sequence of a cDNA encoding
                                               Query Match
Best Local Similarity
Services 5; Conserve
                                                                                                                                             A; Map position:
C; Superfamily: ]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 e family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C;Species: Isochrysis galbana
C;Date: 19-Mar-1997 #sequence_revision 19-Mar-1997 #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            fucoxanthin chlorophyll a/c-binding light-harvesting N, \\ \text{Alternate names: FCP protein}
                                                                                                                                                                                                                                               A; Molecule type: DNA
A; Residues: 1-236 <WHI>
                                                                                                                                                                                                                                                                                                                                                                                                                       C;Species: Deinococcus radiodurans
C;Date: 03-Dec-1999 #sequence_revision
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A; Residues: 1-208 <LAR>
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                                                                                                                                                                               A; Gene: DR0348
                                                                                                                                                                                                             A;Cross-references: GB:AE001895; GB:AE000513; NID:g6458024; PIDN:AAF09930.1; PID:g645
A;Experimental source: strain R1
                                                                                                                                                                                                                                                                           A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                  cytochrome c-type biogenesis protein, heme exporter protein C -
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Best Local Similarity
Matches 5; Conser
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101 TWGTYW 106
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                                                                Conservative
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                                                                               67.2%;
83.3%;
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83.3%;
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                                                              Score 39; DB Pred. No. 45; 0; Mismatches
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Pred. No.
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45;
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Utterback,
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T.; Zalewski,
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Rv0090

Mycobacterium

tuberculosis

(strain H37RV)

tuberculosis

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C:Superfamily: Saccharomyces protein-tyrosine-phosphatase, nonreceptor type 1; protein-to:Keywords: phosphoprotein; phosphoric monoester hydrolase; tyrosine-specific phosphatase;52-303/Domain: protein-tyrosine-phosphatase homology cPTP>
F:522/Active site: Cys (phosphocysteine intermediate) #status predicted
F:258/Binding site: substrate phosphate (Arg) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C;Date: 17-Jul-1998 #sequence_revisi
C;Accession: B70750
R;Cole, S.T.; Brosch, R.; Parkhill,
R; Connor, R.; Davles, R.; Devlin, K.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein-tyrosine-phosphatase (EC 3.1.3.48), nonreceptor type 1 - yeast (Saccharomyces N,Alternate names; protein D0815; protein YDL230w C;Species: Saccharomyces cerevisiae C;Date: 30-bec-1991 #sequence_revision 08-Mar-1996 #text_change 21-Jul-2000 C;Accession: A39862; S67793
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Authors: Sqares, R.; Sulston, J.E.; Taylor, K.; Whitehead, S.; Barrell, B.G. A; Title: Deciphering the biology of Mycobacterium tuberculosis from the comple A; Reference number: A70500; MUID:98295987
A; Accession: B70750
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        R;Guan, K.; Deschenes, R.J.; Qiu, H.; Dixon, J.E. J. Biol. Chem. 266, 12964-12970, 1991
A;Title: Cloning and expression of a yeast protein A;Reference number: A39862; MUID:91302312
A;Accession: A39862
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                                                                                                                                                                                                                                                                                                                                                                                 A;Gene: SGD:PTP1; MIPS:YDL230w
                                                                                                                                                                                                                                                                                                                                                                                                                           A;Cross-references: EMBL:Z74278; NID:g1431387; PIDN:CAA98809.1; PID:g1431388; A;Experimental source: strain S288C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Molecule type: DNA
A;Residues: 1-335 <RAS>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          submitted to the Protein Star, Reference number: S67778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Molecule type: DNA
A; Residues: 1-335 <GUA>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Accession: S67793
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              R;Rasmussen,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Cross-references: GB:Z74410;
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Best Local S
Matches 6
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                                                                                                                    Query Match
Best Local
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    108
                                                 1 KTWGQYW 7
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KTWDQFW
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                                                                                                                    Similarity
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                                                                                              Conservative
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66.7%;
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                                                                                                                    67.28;
71.48;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NID: g172295; PIDN: AAA34923.1;
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Pred. No. 48;
2; Mismatches
                                                                                         Score 39; DB 1; Pred. No. 61; 1; Mismatches
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RESULT

R;Lin,

X.; Kaul,

Rounsley, S.D.;

Shea, T.P.;

Benito, M.I.; Town, C.D.; Fujii,

C.Y

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Chin, C.W.; Chung, M.K.; Conn, L.; Conway, A.B.; Conway, A.R.; Creasy, T.H.; Dewar, ansen, N.F.; Hughes, B.; Hulzar, L.
Nature 408, 816-820, 2000

A; Authors: Hunter, J.L.; Jenkins, J.; Johnson-Hopson, C.; Khan, S.; Khaykin, E.; Kim, C.A.; Li, J.H.; Li, Y.; Lin, X.; Liu, S.X.; Liu, Z.A.; Luros, J.S.; Maiti, R.; Marzia Rizzo, M.; Rooney, T.; Rowley, D.; Sakano, H.
A; Authors: Salzberg, S.L.; Schwartz, J.R.; Shinn, P.; Southwick, A.M.; Sun, H.; Tallo ker, M.; Wu, D.; Yu, G.; Fraser, C.M.; Venter, J.C.; Davis, R.W.
A; Title: Sequence and analysis of chromosome 1 of the plant Arabidopsis.
A; Accession: E96648
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                     histidine transport protein (PTR2-B) [imported] - Arabidopsis thaliana C;Species: Arabidopsis thaliana (mouse-ear cress)
C;Date: 02-Feb-2001 #sequence_revision 02-Feb-2001 #text_change 02-Feb
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E96648
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C;Species: Arabidopsis thaliana (mouse-ear cress)
C;Date: 02-Feb-2001 #sequence_revision 02-Feb-2001 #text_change 02-Feb-2001
C;Accession: A84432
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A; Map position: 1
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A;Molecule type: DNA
A;Residues: 1-568 <STO
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C;Species: Arabidopsis thaliana (mouse-ear cress)
C;Date: 02-Mar-2001 #sequence_revision 02-Mar-2001 #text_change 31-Mar-2001
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A; Accession: A84432
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A;Residues: 1-545 <STO>
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Best Local S
Matches 4
;Accession: C84432
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57.1%;
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Pred. No. 99;
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Conway, A.B.; Conway, A.R.; Creasy,
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probable membrane protein Cj1013c [imported] - Campylobacter jejuni (strain C;Speciles: Campylobacter jejuni (C;Date: 31-Mar-2000 #sequence_revision 31-Mar-2000 #text_change 31-Mar-2000 C;Accession: B81303 R;Parkhill, J.; Wren, B.W.; Mungall, K.; Ketley, J.M.; Churcher, C.; Basham,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Gene:
A; Map po
                                                            A;Cross-references: GB:AL139077; A;Experimental source: serotype (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     R:Frommer, W.B.; Hummel, S.; Rentsch, D. FEBS Lett. 347, 185-189, 1994
A:Title: Cloning of an Arabidopsis histidine A;Reference number: S46236; MUID:94307379
A:Accession: S46236
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C;Accession: $46236
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A;Molecule type: DNA
A;Residues: 1-585 <STO>
                                  A; Gene:
                                                                                               A; Residues:
                                                                                                               A; Molecule
                                                                                                                              A;Status:
                                                                                                                                         A; Reference number: A81250;
A; Accession: B81303
                                                                                                                                                        A; Title: The genome sequence of the food-borne pathogen Campylobacter jejuni reveals A; Reference number: A81250; MUID:20150912
                                                                                                                                                                                       C.W.; Quail, M.; Ra
Nature 403, 665-668,
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C; Keywords:
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C; Genetics:
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A; Residues: 1-586 <FRO>
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position: 2
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84420; MUID:20083487
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57.1%;
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57.1%;
                                                              GB:AL111168; NID:g6968444; PIDN:CAB73269.1; O2, strain NCTC 11168
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Pred.
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A;Reference number: A35403;
A;Accession: B35403
A;Status: preliminary; not
                      R;Hryniewicz, p., Jan. 3366, 1990
J. Bacteriol. 172, 3358-3366, 1990
A;Title: Sulfate and thiosulfate transport
                                                                                                                                                                        A; Title: The complete genome sequence of Escherichia coli K-12 A; Reference number: A64720; MUID:97426617 A; Accession: G65016
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S75029
                                                                                        A;Cross-references: GB:AE000330; GB:U00096; NID:g1788763; PIDN:AAC75477.1; A;Experimental source: strain K-12, substrain MG1655
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A;Cross-references: EMBL:D90910; GB:AB001339; NID:g1652956; PIDN:BAA17891.1; A;Note: the nucleotide sequence was submitted to the EMBL Data Library, June C;Superfamily: Synechocystis hypothetical protein slr2003
                                                                                                                                                                                                                                                                                                 C;Accession: S75029
R;Kaneko, T.; Sato, S.; Kotani, H.; Tanaka, A.; Asaro, K.; Okumura, S.; Shimpo, S.; Takeuchi, C.; Wada, DNA Res. 3, 109-136, 1996
                                                                                                                                                                                                                                                                                                                                                             hypothetical protein slr2003 - Synechocystis sp. (strain PCC 6803)
C;Species: Synechocystis sp.
A;Variety: PCC 6803
C;Date: 25-Apr-1997 #sequence_revision 25-Apr-1997 #text_change 20-Jun-2000
                                                                                                                                                                                                                                                                                       A; Title:
                                                                                                                                                                                       A; Molecule type: DNA
A; Residues: 1-209 <KAN>
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Best Local S
Matches 5
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KTWQRYW
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                                                             Similarity 71.5; Conservative
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50.0%;
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Pred. No.
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ada, T.; Watanabe,
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1996
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R; Blattner, F.R.; Plunkett I .A.; Rose, D.J.; Mau, B.; Sh Science 277, 1453-1462, 1997 R;Sirko, A.; Hryniewicz, M.; Hulanicka, D.; Boeck, A. J. Bacteriol. 172, 3351-357, 1990 A;Title: Sulfate and thiosulfate transport in Escherichia A;Reference number: A35402; MUID:90264334 C;Date: 31-Dec-1990 #sequence\_revision 31-Dec-1990 #text\_change 16-Jul-1999 C;Accession: A35402; G65016; B35403 A;Cross-references: GB:m32101; GB:m38050; NID:g145657; A;Experimental source: strain K12 A; Molecule type: DNA A; Residues: 1-277 <SIR> C; Species: Escherichia coli N; Alternate A; Accession: A35402 sulfate/thiosulfate transport protein cysT - Escherichia coli 24 names: sulfate transport system permease protein cysT Plunkett III, G.; Mau, B.; Shao, Y. Shao, Bloch, C.A.; Perna, PIDN:AAA23637.1; PID:g145659 N.T.; Burland, coli K-12: nucleotide V.; Riley, M.; seque

preliminary; nucleic acid sequence not shown;

translation

not

PID:g17887

1-277 <BLAT>

iminary;

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conceptual

Boeck,

Α.

Hulanicka,

in Escherichia

coli K-12:

identification

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A; Molecule type: DN
A; Residues: 1-126, '
C; Comment: This is
C; Genetics:
                                    A; Residues: 1-290 <STO>
A; Residues: 1-290 <STO>
A; Cross-references: GB:AE005174; NID:g12518989; PIDN:AAG59239.1;
A:Evnerimental source: strain O157:H7, substrain EDL933
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            iller, L.; Grotbeck, E.J.; Davis, N.W.; Lim, A.; Dimalanta, Nature 409, 529-533, 2001

A;Title: Genome
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C;Superfamily: maltose transport protein malG
C;Keywords: binding protein-dependent transport system;
A; Gene: ubiA
C; Superfamily:
                                                                                                                                                  A; Title: Genome sequence of enterohemorrhagic Escherichia A; Reference number: A85480; MUID:21074935; PMID:11206551 A; Accession: C86097
                                                                                                                                                                                                                 iller, L.; Grotbeck, E.J.
Nature 409, 529-533, 2001
                                                                                                                                                                                                                                                                        4-hydroxybenzoate-octaprenyltransferase [imported] - Escherichia coli (stra C;Species: Escherichia coli C;Species: Escherichia coli C;Date: 16-Feb-2001 #sequence_revision 16-Feb-2001 #text_change 31-Mar-2001 C;Accession: C86097
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C;Accession: B85885
R;Perna, N.T.; Plunkett III, G.; Burland, V.; Mau, B.; Glasner, J.D.; Rose,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          hypothetical protein cysU [imported] – Escherichia coli (strain O157:H7)
C;Species: Escherichia coli
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A;Reference number: A85,480; MUID:21074935; PMID:11206551
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62.5%;
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Pred. No.
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Pred. No.
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73;
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Potamousis,
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Query Match

Score

38;

DB 2;

Length 290;

preliminary; translated from GB/EMBL/DDBJ

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R;Suzuki, K.; Ueda, M.; Yuasa, M.; Nakagawa, T.; Kawamukai, M.; Matsuda, A;Title: Evidence that Escherichia coli ubia product is a functional homo A; Reference number: JC2316; MUID:95072311

A;Molecule ***.**
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 R:Siebert, M.; Bechthold, A.; Melzer, M.; FEBS Lett. 307, 347-350, 1992
A:Title: Ubiquinone biosynthesis. Cloning A:Reference number: $24360; MUID:92334744
A:Accession: $24361
A;Residues: 48-290 <LIL>
R;Wu, G.; Williams, H.D.; Glbson, F.; Poole, R
J. Gen. Microbiol. 139, 1795-1805, 1993
A;Title: Mutants of Escherichia coli affected
A;Reference number: I55717; MUID:94014977
A;Accession: I70801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Cross-references: GB:M93413; NID:g148106; PIDN:AAA24717.1; PID:g148108
A;Note: sequence extracted from NCBI backbone (NCBIN:110475, NCBIP:110480)
R;Nishimura, K.; Nakahigashi, K.; Inokuchi, H.
J. Bacteriol. 174, 5762, 1992
A;Title: Location of the ubiA gene on the physical map of Escherichia coli.
A;Reference number: S25660; MUID:92380960
A;Accession: S25661
                                                                                                                                                                           A;Title: The 92-min region of the Escherichia A;Reference number: PC1295; MUID:93328130 A;Accession: PC1295
                                                                                                                                                                                                                                              A;Cross-references: EMBL:X69522; NID:g41180; PIDN:CAA49270.1; PID:g41181 R;Lilley, P.E.; Stamford, N.P.J.; Vasudevan, S.G.; Dixon, N.E. Gene 129, 9-16, 1993
                                                                                                                                                                                                                                                                                                              A; Molecule type: DNA
A; Residues: 1-290 <WOL>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Cross-references: EMBL:X57434; NID:g43233; PIDN:CAA40682.1; PID:g43235
A;Experimental source: strain K12 W3110
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Molecule type: DNA
A; Residues: 1-290 <SIE>
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A; Residues: 1-290 <NIC>
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A; Residues: 1-290 <SUZ>
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                                                                                                                                                         acid sequence not
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C;Species: Caenorhabditis elegans
C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #
C;Accession: T22928
R;Smye, R
submitted to the EMBL Data Library, November 1996
A;Reference number: Z19639
A;Accession: T22928
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 1-569 <WILL>
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A; Molecule type: DNA
A; Residues: 1-290 <BLAT>
A; Cross-references: GB:AE000477; GB:U00096; NID:g2367338; PIDN:AAC77010.1; PI
A; Experimental source: strain K-12, substrain MG1655
C; Gene: ubiA; cyr
A; Map position: 92 min
C; Function:
A; Description: catalyzes a key step in ubiquinone biosynthesis (condensation c); Superfamily: 4-hydroxybenzoate octaprenyltransferase
C; Keywords: transferase
R;Bult, C.J.; White, O.; Olsen, G.J.; Zhou, L.; Fleischmann, R.D.; Sutton, G.G.; Reich, C.I.; Overbeek, R.; Kirkness, E.F.; Weinstock, K.G.; Merrick, J.M.; Glocrson, J.D.; Sadow, P.W.; Hanna, M.C.; Cotton, M.D.; Roberts, K.M.; Hurst, M.A. Science 273, 1058-1073, 1996
A;Authors: Kaine, B.P.; Borodovsky, M.; Klenk, H.P.; Fraser, C.M.; Smith, H.O.; W
                                                                                                                         hypothetical protein MJ1185 - Methanococcus jannaschii C;Species: Methanococcus jannaschii C;Species: Methanococcus jannaschii C;Date: 13-Sep-1996 #sequence_revision 13-Sep-1996 #text_change 21-Jul-2000 C;Accession: H64447
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A;Residues: 1-81 <RES>
A;Cross-references: GB:M96268; NID:g347886; PIDN:AAA17028.1; PID:g347889
A;Cross-references: GB:M96268; NID:g347886; PIDN:AAA17028.1; PID:g347889
R;Blattner, F.R.; Plunkett III, G.; Bloch, C.A.; Perna, N.T.; Burland, V.; Riley, M.;
A.; Rose, D.J.; Mau, B.; Shao, Y.
Science 277, 1453-1462, 1997
A;Title: The complete genome sequence of Escherichia coli K-12.
A;Reference number: A64720; MUID:97426617
A;Accession: G65211
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H64447
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A; Introns: 49/3; 126/1;
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Best Local Similarity
Matches 5; Conser
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A;Title: Complete genome sequence of the methanogenic archaeon, Methanococcus jannasc A;Reference number: A64300; MUID:96337999
A;Accession: H64447
A;Status: preliminary; nucleic acid sequence not shown; translation not shown A;Molecule type: DNA
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A;Residues: 1-622 <BUL>
A;Cross references: GB:U67559; GB:L77117; NID:g1591798; PIDN:AAB99186.1; PID:g1591812 C;Genetics:
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A;Authors: Wallin, E.; Hayes, W.S.; Borodovsky, M.; Karpk, P.D.; Smith, H.O.; Fraser A;Title: The complete genome sequence of the gastric pathogen Helicobacter pylori.
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C;Species: Helicobacter pylori
C;Date: 09-Aug-1997 #sequence_revision 09-Aug-1997 #text_change
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CCSA_CYACA
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p76463 escherichia
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p25044 saccharomyc
p46032 arabidopsis
p16701 escherichia
p26220 streptomyce
p31564 cyanidium c
p49523 odontella s
Q59935 streptococc
p51369 porphyra pu
p41650 pinus thunb
p48257 cyanophora
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p43862 haemophilus
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## ALIGNMENTS

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SEQUENCE FROM N.A., AND SEQUENCE OF 25-53.  SEQUENCE FROM N.A., AND SEQUENCE OF 25-53.  MEDLINE-94235165; PubMed-8179825;  Marcesh G.A., Marken J.S., Neubauer M., Aruffo A., Hellstroem I.,  Hellstroem K.E., Marquardt H.;  "Cloning and expression of the gene for the melanoma-associated ME20 antigen.";  DNA Cell Biol. 13:87-95(1994).  [5]  SEQUENCE FROM N.A.	R R R R R R R R R R R R R R R R R R R
SEQUENCE FROM N.A.  SEQUENCE FROM N.A.  MEDLINE-96154052; PubMed-8592076;  Bailin T., Lee S.T., Spritz R.A.;  Bailin T., Lee S.T., Spritz R.A.;  "Genomic organization and sequence of D12853E (Pmel 17), the human homologue of the mouse silver (si) locus.";  J. Invest. Dermatol. 106:24-27(1996).	R R R R R R R R R R R R R R R R R R R
NCE FROM N.A. NE=94327568; PubMed=7519602; G.J., de Boer A.J., Vogel A.M., cular characterization of the mel en gp100."; ol. Chem. 269:20126-20133(1994).	RT RA RA
SEQUENCE FROM N.A.  SEQUENCE FROM N.A.  SEQUENCE FROM N.A.  MEDLINE=92021023; PubMed=1924386;  Kwon B.S., Chintamaneni C., Kozak C.A., Copeland N.G.,  Kwon B.S., Jenkins N.A., Barton D., Francke U., Kobayashi Y.,  Gilbert D.J., Jenkins N.A., Barton D., Francke U., Kobayashi Y.,  Kim KK.;  "A melanocyte-specific gene, Pmel 17, maps near the silver coat color locus on mouse chromosome 10 and is in a syntenic region on human chromosome 12.";  Proc. Natl. Acad. Sci. U.S.A. 88:9228-9232(1991).	R R R R R R R R R R R R R R R R R R R
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EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          use by non-profit institutions as long modified and this statement is not removed. entities requires a license agreement (See
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL;
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                                                                                 SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IS ALSO A SECRETED SOLUBLE FORM, ME20-S PROTEOLYTIC CLEAVAGE.
TISSUE SPECIFICITY: PREFERENTIALLY EXPRESSION WAS FOUND IN DYSPLASTIC NEVITIESUES NOR IN CARCINOMAS.
SIMILARITY: BELONGS TO THE PMEL-17/NMB SIMILARITY: CONTAINS 1 PKD DOMAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FUNCTION: COULD BE A MELANOGENIC ENZYME. COULD REPRESENT AN ONCOFETAL SELF-ANTIGEN THAT IS NORMALY EXPRESSED AT LOW LEVELS QUIESCENT ADULT MELANOCYTES BUT OVEREXPEXESED BY PROLIFERATING NECONATAL MELANOCYTES AND DURING TUMOR GROWTH. RELEASE OF THE SOLUBLE FORM, ME20-S, COULD PROTECT TUMOR CELLS FROM ANTIBODY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               s SWISS-PROT entry is copyright. It is produced through a cween the Swiss Institute of Bioinformatics and the EMBL European Bioinformatics Institute. There are no restrict
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SUBCELLULAR LOCATION: TYPE IS ALSO A SECRETED SOLUBLE
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U31807;
U31797;
U31798;
U31798;
U01874;
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S73003;
U31799;
  Similarity
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PS50093; PKD;
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AAC60634.1;
AAB00386.1;
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AAA35930.
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L-> P (IN REF. 1 AND 5).
P -> PVPGILLT (IN REF. 1).
G -> GG (IN REF. 4).
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Pred.
                                                                           RIFCSCPIGENSPLLSGQQV -> ASSALVPLVRIAPSSVG SRSEYSHMML (IN REF. 6).
8A904FAB16715653 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   POTENTIAL.
CYTOPLASMIC (POTENTIAL).
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EXTRACELLULAR (POTENTIAL).
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FORM, ME20-S, PROBABLY PRODUCT (
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  No.
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PRESCRIPTION OF THE PRESCR
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SIGNAL
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                                                                                                             REPEAT
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                                                                                                                                       REPEAT
REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "Mouse silver mutation is caused by putative cytoplasmic domain of Pmel Nucleic Acids Res. 23:154-158(1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-NOY-1997 (Rel. 35, Last sequence update)
01-OCT-2000 (Rel. 40, Last annotation updat
MELANOCYTE PROTEIN PMEL 17 PRECURSOR (SILVE
SILV OR PMELT 7 OR D10H12S53E OR SI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q60696;
01-NOV-1997
                                                                                                                                                                                                                                                                                                             MGD;
                                                                                                                                                                                                                                                                                                                                                                    the European Bioinformatics Institute. The use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                        This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRAIN=C57BL/6; TISSUE=Skin;
MEDLINE=95175358; PubMed=7870580;
Kwon B.S., Halaban R., Ponnazhaga
                                                                                                 REPEAT
                                                                                                                                                                                                                                                                                                                                              entities requires a license agreement (See http://www.isb-sib.ch/announce/
or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -!- SUBCILIULAR ICCATION: TYPE I MEMBRANE PROTEIN (POTENTIAL).
-!- TISSUE SPECIFICITY: PREFERENTIALLY EXPRESSED IN MELANOCYTES.
-!- DISEASE: DEFECTS IN PMEL17 ARE THE CAUSE OF THE SILVER COAT WHICH SEEMS TO BE DUE TO PREMATURE DEATH OF PIGMENT CELLS DU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa;
Mammalia; Eutheria;
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Bennett D., Pickard R.T.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus (Mouse)
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                                                                                                                                                                                                                                                                                                   PKD;
   Chordata; Rodentia;
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7 X 13 AA APPROXIMATE TANDEM REPEATS
                                                                                                                                                                                                                          POTENTIAL.
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EXTRACELLULAR
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Sciurognathi;
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thi; Muridae;
                                                                                                                                                                                                                                                    PROTEIN PMEL
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(POTENTIAL).
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CELLS DURING
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Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 P115_CHICK
Q98917;
15-JUL-1998
            PROSITE;
Signal; G
SIGNAL
                                                                                        This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation—the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                       "Expression of gene coding for a melanosomal matrix protein transcriptionally regulated in the transdifferentiation of chick embryo pigmented epithelial cells.";

Cell Differ 24.67-74.7700
                                                                                                                                                                                                                                                                                                                                    Cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRAIN-WHITE LEGHORN;
MEDLINE-92020667; Pub
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15-JUL-1998
01-OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CHICK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VARIANT
                                              Pfam; PF00801; PKD;
                                                                    EMBL; D88348; BAA13589.1;
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MEDLINE-88311098; Publ
                                                                                                                                                                                                                                                                                                                                                                                                                      CHARACTERIZATION
                                                                                                                                                                                                                                                                                                                                                                                                                                            "Complete sequence and expression of 115 kDa melanosomal matrix protein.", Pigment Cell Res. 4:41-47(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mochii M., Agata K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=9031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa;
Archosauria; Aves;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gallus gallus (Chicken).
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                                                                                                                                                                                                                                                                                          L Differ. 24:67-74(1988).
FUNCTION: MIGHT BE REQUIRED FOR POLYMERIZATION OF MELANIN ONTO CORE STRUCTURE OF MELANOSOMES WITH ENZYMIC FUNCTION OF TYROSINA SUBCELLULAR LOCATION: ON THE FIBROUS MATRIX STRUCTURE OF THE
                                                                                                                                                                                      SIMILARITY: BELONGS TO THE PMEL-17 SIMILARITY: CONTAINS 1 PKD DOMAIN.
                                                                                                                                                                                                                                      DEVELOPMENTAL STAGE:
                                                                                                                                                                                                                                                            TISSUE SPECIFICITY: SPECIFIC MELANOCYTES. NOT EXPRESSED IN
                                                                                                                                                                                                                                                   GIZZARD OR LIVER.
                                                                                                                                                                                                                                                                                      PREMELANOSOME
                                                                                                                                                                                                                            PIGMENTED EPITHELIAL
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                     Glycoprotein;
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                                                                                                                                                                                                                 GLYCOSYLATED
                                    PS50093;
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                                                                                                                                                                                                                                                                                                                                                                                              ORN; TISSUE-Retinal pigment epithelium PubMed=3409326;
                                    PKD;
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19
762
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Neognathae;
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annotation update)
115 KDA PROTEIN PRECURSOR
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 MELANOSOMAL MATRIX PROTEIN 115
            POTENTIAL
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; Galliformes;
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1.3;
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nes; Phasianidae; Phasianinae;
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01-OCT-1996 (Rel. 34
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SPORE-CORTEX-LYTIC F
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P50739;
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                                                                                                                                      This
                                                                                                                                                    "Sequence analysis of the Bacillu the serA and kdg loci cloned in a Microbiology 142:2005-2016(1996).
                                                                                         use by non-profit institutions as long modified and this statement is not removed entities requires a license agreement (See
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NCBI_TaxID=1423;
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IPR002477; -.
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email to license@isb-sib.ch)
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Last annotation 
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artificial chro
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Pfam; PF01471;

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POTENTIAL.

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RESULT 5
CCSA_CHLVU
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Best Local
  30-MAY-2000
30-MAY-2000
01-OCT-2000
                                                            CCSA_ARATH
P56770;
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Cytochrome
SEQUENCE
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SEQUENCE
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-1- FUNCTION: REQUIRED DURING CYTOCHROME BIOGENESIS HEME ATTACHMENT (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCSA_CHLVU
P56315;
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15-JUL-1998
15-JUL-1998
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            the European Bioinformatics Institute. There are no rest
use by non-profit institutions as long as its content
modified and this statement is not removed. Usage by an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=97303241; PubMed=9159184; Wakasugi T., Nagai T., Kapoor M.,
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STRAIN-IAM C-27 /
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hrome c-type biogenesis;
NCE 315 AA; 35471 MW;
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C BIOGENESIS PROTEIN CCSA.
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2; Mismatches
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Suzuki Y., H
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             This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pfam; PF01578; cytc_asm, chloroplast. Cytochrome c-type biogenesis; Chloroplast. SEQUENCE 328 AA; 37732 MW; C88D1508B2924D6F
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Eukaryota; Viridiplantae; Embryophyta; Tracheophyta; Spermatophyta; Eukaryota; Viridiplantae; Embryophyta; Tracheophyta; Spermatophyta; Eukaryota; Rosidae; eurosids II; Magnollophyta; eudicotyledons; core eudicots; Rosidae; eurosids II; Prassicales: Brassicaceae; Arabidopsis.
                                                                        "The complete genome sequence of Escherichia coli K-12."; Science 277:1453-1474(1997).
                                                                                                   Blattner F.R., Plunkett G. III, Bloch C.A., Perna N.T., Burland V Riley M., Collado-Vides J., Glasner J.D., Rode C.K., Mayhew G.F., Gregor J., Davis N.W., Kirkpatrick H.A., Goeden M.A., Rose D.J., Mau B., Shao Y.;
                                                                                                                                                             SEQUENCE FROM N.A.
STRAIN-K12 / MG1655;
MEDLINE-97426617; PubMed-9278503;
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Sato S., Nakamura Y., Kaneko T., Asamizu E.,
"Complete structure of the chloroplast genome
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Fam; PF01578; CytC_asm; 1.
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SIMILARITY: BELONGS TO THE CCMF/CYCK/CCL1/NRFE/CCSA FAMILY.
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PROTEIN IN ATOB-GYRA INTERGENIC
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-- SUBCELLULAR LOCATION: OUTER MEMBRANE (POTENTIA-1- SIMILARITY: STRONG, TO Y. PESTIS HEMIN-BINDING
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MEDLING-97426617; PubMed-9278503;
Blattner F.R., Plunkett G. III, Bloch C.A
Riley M., Collado-Vides J., Glasner J.D.,
Gregor J., Davis N.W., Kirkpatrick H.A., (
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Kimura S., Kitagawa M., Makino
Mori H., Motomura K., Nakamura
Sampei G., Seki Y., Tagami H.,
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HYPOTHETICAL
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                                                                                                                                                                   SWISS-PROT entry is copyright. It is produced through a veen the Swiss Institute of Bioinformatics and the EMBL European Bioinformatics Institute. There are no restrict
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                                                                                           non-profit institutions as long and this statement is not removed requires a license agreement (See an email to license@isb-sib.ch).
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Itoh T., Kajihara M., Kanai K., Kashimoto K.,
M., Makino K., Masuda S., Miki T., Mizobuchi K.,
Nakamura Y., Nashimoto H., Nishio Y., Saito N.,
Tagami H., Takemoto K., Wada C., Yamamoto Y.,
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Best Local
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01-NOV-1997
01-OCT-2000
      Pfam; PF00504; chloroa_b-bind; 2.
Light-harvesting polypeptide; Chloroplast; Phot
Photosystem II; Multigene family; Chlorophyll;
Thylakoid membrane; Transit peptide
                                                                                                                                                                          This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Isochrysis galbana.
Eukaryota; Haptophyceae;
NCBI_TaxID=37099;
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Q39709;
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                                                                     EMBL; X77333; CAA54547.1;
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                                                            InterPro;
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                                                                                                          modified and this statement entities requires a license
                                                                                                                                                             between
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                                                                                                                                                                                                                                                                                                                                                       -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Laroche J., Henry D., Wyman K., Sukenik A., Falkowski P.; "Cloning and nucleotide sequence of a cDNA encoding a majo fucoxanthin-chlorophyll a/c-containing protein from the chisochrysis galbana: implications for evolution of the cab
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRAIN-DUN;
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                                                                                                                                                                                                                                     (0.6-1): (0.1-0.3): (1).
SUBCELLULAR LOCATION: CHLOROPLAST THYLAKOID MEMI PROBABLY TRANSPORTED ACROSS THE ENDOPLASMIC RET. THAT SURROUND THE PLASTID VIA A SIGNAL PEPTIDE, TRANSLOCATION ACROSS THE THYLAKOID MEMBRANE VIA INDUCTION: EXPRESSION IS INCREASED 5-FOLD UNDER
                                                                                                                                                                                                                        MOT
                                                                                                                                               European
                                                                                                                                                                                                                                                                                                                                                                 POWER
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FUNCTION: THE LIGHT-HARVESTING COMPLEX (LHC) FUNCTIONS AS A LIGHT-HARVESTING COMPLEX (LHC) FUNCTIONS AS A LIGHT-HARVES AND DELIVERS EXCITATION ENERGY TO PHOTOSYST WITH WHICH IT IS CLOSELY ASSOCIATED. ENERGY IS TRANSFERED FROM THE CAROTENOID AND CHL C (OR B) TO CHL A AND THE PHOTOSYNTHETIC REACTION CENTERS WHERE IT IS USED TO SYNTHESIZE ATP AND REDUCIN
                                                                                                                                                                                                  PROTEINS
                                                                                                                                                                                                               SIMILARITY:
                                                                                                                                                                                                                                                                                                   PIGMENTS IN LHC; FUCOXANTHIN: (0.6-1): (0.1-0.3): (1).
                                                                                                                                                                                                                                                                                                                           FUCOXANTHIN, CHLOROPHYLL FUCOXANTHIN CHLOROPHYLL
                                                                                                                                                                                                                                                                                                                                                       SUBUNIT: THE LHC
                                                                                                                      SWISS-PROT entry is copyright. It is produced through een the Swiss Institute of Bioinformatics and the Enteuropean Bioinformatics Institute. There are no restriby non-profit institutions as long as its content by non-profit institutions as long as its content fied and this statement is not removed. Usage by and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
5; Conserv
                                                                                               s requires a license agreement (See an email to license@isb-sib.ch).
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Pred. No.
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38;
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                     Photosynthesis;
yll; Transmembrane;
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                                                                                                          http://www.isb-sib.ch/announce/
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the chrysophyte
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Peptide.
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PTP1_YEAST P25044;
                                                                                                                                                                                                                                                                                                                                                                    MEDINE-98295987; PubMed-9634230; Garnier T., Churcher C., Harris Cole S.T., Brosch R., Parkhill J., Garnier T., Churcher C., Harris Gordon S.V., Eiglmeier K., Gas S.J. Barry C.E. III, Tekaia F., Badcock K., Basham D., Brown D., Chillingworth T., Connor R., Badcock K., Basham D., Brown D., Chillingworth T., Connor R., Davies R., Devlin K., Feltwell T., Gentles S., Hamlin N., Holroyd Hornsby T., Jagels K., Krogh A., McLean J., Moule S., Murphy L., Oliver S., Osborne J., Quail M.A., Rajandream M.A., Rogers J., Rutter S., Seeger K., Skelton S., Squares S., Sqares R., Sulston J. Taylor K., Whitehead S., Barrell B.G.; "Deciphering the biology of Mycobacterium tuberculosis from the
                                                                                                                                                                          TRANSMEM SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01.02T-1996 (Rel. 34, Created)
01.0CT-1996 (Rel. 34, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
HYPOTHETICAL 27.8 KDA PROTEIN RV0090.
                                                                                                                                                                                                                                                                                                                                    complete genome sequence.";
Nature 393:537-544(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TRANSMEM
SEQUENCE
                                                                                                                                                                                                                                                                   This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EW the European Bioinformatics Institute. There are no restruse by non-profit institutions as long as its content modified and this statement is not removed. Usage by and entities requires a license agreement (See http://www.isb-s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MYCTU
                                                                                                                                                                                                 Hypothetical
TRANSMEM 1
                                                                                                                                                                                                                        EMBL; 274410; CAA98926.1; -. TubercuList; Rv0090; -.
                                                                                                                                                                                                                                                 or send an email to license@isb-sib.ch).
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Bactinomycetales; Corynebacterineae; Mycobacteriaceae;
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NCBI_TaxID=1773;
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21A36700137A0F1B CRC64;
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            PRT;
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16;
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ID PTZB_ARATH

FTZB_ARATH

AC P46032;

DT 01-NOV-1995 (Rel. 32, Created)

DT 01-NOV-1995 (Rel. 32, Last sequence update)

DT 01-CT-2000 (Rel. 40, Last annotation update)

DT PEPTIDE TRANSPORTER PTR2-B (HISTIDINE TRANSPORTING PROTE

GN PTR2-B OR NTR1 OR ATZG02040 OR F14H20.11.

OS Arabidopsis thaliana (Mouse-ear cress).

OC Eukaryota; Viridiplantae; Embryophyta; Tracheophyta; Spe

OC Magnoliophyta; eudicotyledons; core eudicots; Rosidae; e

OC Brassicales; Brassicaceae; Arabidopsis.
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EMBL; 74278; CAA98809.1; -.
PIR; A39862; A39862.
HSSP, P18052; 1YFO.
SGD; S0002389; PTP1.
InterPro; IPR000242; -.
InterPro; IPR000387; -.
InterPro; IPR00102; Y_phosphatase; 1.
Pfam; PF00102; Y_phosphatase; 1.
PRINTS; PR00700; PRTYPHPHTASE.
PROSITE; PS00383; TYR_PHOSPHATASE_1; 1.
PROSITE; PS0036; TYR_PHOSPHATASE_2; 1.
PROSITE; PS00365; TYR_PHOSPHATASE_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hydrolase.
ACT_SITE
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         J. Biol. Chem. 266 [2] SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.

MEDLINE=91302312; PubMed=1649172;
Guan K., Deschenes R.J., Qiu H., Dixon J.E.;

"Cloning and expression of a yeast protein t
J. Biol. Chem. 266:12964-12970(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Saccharomyces cerevisiae (Baker's yeast).
Eukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomycetales; Saccharomycetaceae; Saccharomyces.
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01-MAY-1992 (Rel. 22, Last sequence update)
01-NOY-1997 (Rel. 35, Last annotation update)
PROTEIN-TYROSINE PHOSPHATASE 1 (EC 3.1.3.48)
PTP1 OR YDL230W.
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38868
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71.4%;
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Pred. No.
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15F71E50694BE562
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                                    Rosidae;
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                                                        Spermatophyta;
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PROSITE; PSO1033; P
Peptide transport;
TRANSMEM 91
TRANSMEM 116
TRANSMEM 200
TRANSMEM 200
TRANSMEM 351
TRANSMEM 387
TRANSMEM 472
TRANSMEM 472
TRANSMEM 472
TRANSMEM 472
TRANSMEM 472
TRANSMEM 511
TRANSMEM 556
CONFLICT 334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Nature 402:761-768(1999).

Nature 402:761-768(1999).

-I- FUNCTION: PEPTIDE TRANSPORT. HIGH AFFINITY, LOW CAPACIT TRANSPORTER. CAN ALSO TRANSPORT HISTIDIRE.

-I- SUBCELLULAR LOCATION: INTEGRAL MEMBRANE PROTEIN.

-I- SIMILARITY: BELONGS TO THE PTR2 FAMILY OF TRANSPORTERS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE-2003487; PubMed=10617197;
Lin X., Kaul S., Rounsley S.D., Shea T.P., Benito M.-I., Town C.D.,
Fujii C.Y., Mason T.M., Bowman C.L., Barnstead M.E., Feldblyum T.V.,
Fujii C.Y., Mason T.M., Bowman C.L., Barnstead M.E., Feldblyum T.V.,
Buell C.R., Ketchum K.A., Lee J.J., Ronning C.M., Koo H., Moffat K.S.,
Cronin L.A., Shen M., VanAken S.E., Umayam L., Tallon L.J., Gill J.E.,
Adams M.D., Carrera A.J., Creasy T.H., Goodman H.M., Somerville C.R.,
Copenhaver G.P., Preuss D., Nierman W.C., White O., Eisen J.A.,
Salzberg S.L., Fraser C.M., Venter J.C.;
"Sequence and analysis of chromosome 2 of the plant Arabidopsis
                                                                                                                                                                                                                                                                                                                                                                                                                                                           the Euro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRAIN=CV. COLUMB: MEDLINE=20083487;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Frommer W.B., Hummel S., Rentsch D.; "Cloning of an Arabidopsis histidine nitrate and peptide transporters.";
                                                                                                                                                                                                                                                                                                                            Pfam; PF00854;
                                                                                                                                                                                                                                                                                                                                                                 EMBL; L39082; EMBL; X77503;
                                                                                                                                                                                                                                                                                                                                                                                                                   entities requires a license agreement (See http://www.isb-sib
                                                                                                                                                                                                                                                                                                                                                                                                                                use by non-profit institutions as long modified and this statement is not removed.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Song W., Steiner H.-Y., Becker J.M.;
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                                                                                                                                                                                                                                                                                                                                         InterPro;
 110
                                                                                                                                                                                                                                                                                                                                                                                                       send an email to license@isb-sib.ch).
                         w
                                                                                                                                                                                                                                                                                                                                                                                                                                                     s SWISS-PROT entry is copyright. It is produced through a collaboration ween the Swiss Institute of Bioinformatics and the EMBL outstation - European Bioinformatics institute. There are no restrictions on its
 WGRYWTI
                        MGQYWAV
                                                                                                                                                                                                                                                                                                                                                   AC006532; AAD20096.1; -
                                                              Similarity
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                                                  Conservative
 116
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PTR2_2; 1.
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248
371
407
451
492
531
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57.1%;
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                                                Score 39; DB
Pred. No. 40;
2; Mismatches
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POTENTIAL.
POTENTIAL.
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C58F8194776E2D97 CRC64;
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RESULT
CYST_EC
       EMBL; M32101; AAA23637.1;
EMBL; AE000330; AAC75477.1;
EMBL; D90871; BAA16298.1;
EMBL; D90872; BAA16307.1;
EMBL; D90872; BAA16307.1;
PIR; A35402; QRECST.
                           PIR; A35402; QRECST.
PIR; B35403; B35403.
EcoGene; EG10197; cysU.
InterPro; IPR000515;
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01-AUG-1990
01-OCT-2000
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_ECOLI
                                                                                                                                                                                                                                                                                                     -K12 genome corresponding to 50.0-68.8 min on the linkage map analysis of its sequence features.";

DNA Res. 4:91-113(1997).
-I- FUNCTION: PART OF THE BINDING-PROTEIN-DEPENDENT TRANSPORT FOR SULPATE AND THIOSULFATE. PROBABLY RESPONSIBLE FOR THE TRANSLOCATION OF THE SUBSTRATE ACROSS THE MEMBRANE.
-I- SUBCELLULAR LOCATION: INTEGRAL MEMBRANE PROTEIN. INNER MEM (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                           Yamamoto Y., Aiba H., Baba T., Hayashi K., Inada T., Isono K., Itoh T., Kimura S., Kitagawa M., Makino K., Miki T., Mitsuhashi N. Mizobuchi K., Mori H., Nakade S., Nakamura Y., Nashimoto H., Oshima T., Oyama S., Saito N., Sampei G., Satoh Y., Sivasundaram Tagami H., Takahashi H., Takeda J., Takemoto K., Uehara K., Wada
                                                                                                                                                                                                                                        This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sirko A., Hryniewicz M.M., Hulanicka E
"Sulfate and thiosulfate transport in
nucleotide sequence and expression of
J. Bacteriol. 172:3351-3357(1990).
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                                                                                                                                                                                                use
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "The complete genome sequence of Science 277:1453-1474(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gregor J., Davis N.W., Kirkpatrick H.A., Goeden M.A.,
Mau B., Shao Y.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Blattner F.R., Plunkett G. III, Bloch C.A Riley M., Collado Vides J., Glasner J.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM
STRAIN-K12 / M
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Bacteria; Proteobacteria;
Escherichia.
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MEDLINE=97426617; PubMed=9278503;
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                   Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                    Yamagata S., Horiuchi T.; "Construction of a contiguous
                                                                                                                                                                                                                                                                                                                                                                                                                                   Yamagata
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=562;
                                                                                                                                                                                                          European Bioinformatics Institute.
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SIMILARITY: WITH INTEGRAL MEMBRANE COMPONENTS OF OTHER BINDING-
                                                                                                                                                                                                                                                                   SUBFAMILY
                                                                                                                                                                                                                                                                              PROTEIN-DEPENDENT TRANSPORT SYSTEMS. BELONGS
                                                                                                                                                                                                                       SWISS-PROT entry is copyright. It is produced through sen the Swiss Institute of Bioinformatics and the EN
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and this statement is not removed
requires a license agreement (See
       PS00402;
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BPD_transp; 1.
02; BPD_TRANSP_INN_MEMBR;
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. 15, Last sequence
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T SYSTEM PERMEASE F
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Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gamma subdivision; Enterobacteriaceae;
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                                                                                                                                                                                               as its content
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gene cluster.";
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TRANSMEM 21
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SEQUENCE 277 A
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  Daniels D.L.;
Panalysis of the Escherichia coli genome.
"Analysis of the Escherichia coli genome.
region from 89.2 to 92.8 minutes.";
region from 89.2 to 92.8 minutes.";
                                                                                           STRAIN-K12 / MG1655;
MEDLINE-94089392; PubMed-8265357;
Blattner F.R., Burland V.D., Plunkett
                                                                                                                                        SEQUENCE FROM N.A.
STRAIN-K12 / MG165
                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
STRAIN=K12 / W3110;
MEDLINE=92380960; P
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MEDLINE-92354744; Pu
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Bacteria; Proteobacteria;
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the ubiA gene on the physical
174:5762-5762(1992).
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0CTAPRENYLTRANSFERASE (EC 2.5.1.-)
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                                                                                                                                                                                                                                                                                                                      Escherichia coli.";
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Ubiquinone
Magnesium.
TRANSMEM
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*EVIĞENCE THAT ESCHETİCİLA COLİ UBİA PICOUCT İS A FUNCTİON

OF YEAST (CO2, and the regulation of ubiA gene expression.

BİOSCİ BİOTECHNOI. BİOCHEM. 58:1814-1819(1994).

-- FÜNCTION: SYNTHESIS OF 3-CCTAPRENYL-4-HYDROXYBENZOATE.

--- CATALYTIC ACTIVITY: 4-HYDROXYBENZOATE + FARNESYLFARNES

--- 3-OCTAPRENYL-4-HYDROXYBENZOATE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Melzer M., Heide L.; "Characterization of polyprenyldiphosphate:4-hydroxybenzoate "Characterization of polyprenyldiphosphate:4-hydroxybenzoate polyprenyltransferase from Escherichia coli."; Biochim. Biophys. Acta 1212:93-102(1994).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "Mutants of Escherichia coli affected in respiration: the nucleotide sequence of ubiA, encoding the membrane-bound hydroxybenzoate:octaprenyltransferase.";
J. Gen. Microbiol. 139:1795-1805(1993).
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MEDLINE=94014977; I
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MEDLINE=94207029;
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S24361; S24361.
S25661; S25661.
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JC2316; JC2316.
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PATHWAY: SECOND STEP IN UBIQUINONE BIOSYNTHESIS.
SUBCELLULAR LOCATION: INTEGRAL MEMBRANE PROTEIN. INNER ME
SIMILARITY: BELONGS TO THE UBIA PRENYLTRANSFERASE FAMILY.
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L; X57434; CAA40682.1; -.
L; X69522; CAA49270.1; -.
L; U00006; AAC45134.1; -.
L; A600047; AAC77010.1; -.
L; M96268; AAA17028.1; -.
L; X63477; CAA45003.1; -.
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01-MAY-1992 (Rel. 22, Created)
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ENDO-1,4-BETA-XYLANASE C PRECURSOR (EC 3.2.1.8) (XYLANASE
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PROSITE; PS00777; GLYCOSYL_HYDROD_F11_2; 1
Xylan degradation; Hydrolase; Glycosidase;
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or send an email to license@isb-sib.ch).
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NCBI_TaxID=1916;
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CATALYTIC ACTIVITY: ENDOHYDROLYSIS OF 1,4-BETA-D-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SWISS-PROT entry is copyright. It is produced through ween the Swiss Institute of Bioinformatics and the Electropean Bioinformatics Institute. There are no restifications of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contra
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PATHWAY: XYLAN DEGRADATION
                                                                                                                                                        KTFQQYWSV
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; A25307; CAA01768.1;
JS0591; JS0591.
                                                                                                                                                                                                                     KTWGQYWAV 9
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   STANDARD;
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                                                                                                                                                                                                                                                                                Score 37; DB Pred. No. 36; 2; Mismatches
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NUCLEOPHILE (BY SIMILARITY).
PROTON DONOR (BY SIMILARITY).
FC663415780142CA CRC64;
   PRT;
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Matches 4
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01-JUL-1993
01-JUL-1993
01-NOV-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE-93004479; PubMed-1391770;
Valentin K., Maid U., Emich "
"Organization"
                             SEQUENCE FROM N.A.

Kowallik K.V., Stoebe B., Schaffran I., Kroth-Pancic The Chloroplast genome of a chlorophyll a+c-contain Contella sinensis.";

Plant Mol. Biol. Rep. 13:336-342(1995).

-!- FUNCTION: REQUIRED DURING CYTOCHROME BIOGENESIS
                                                                                                                                                                                                                                                            ODOSI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Valentin K., Maid U., Emich A., Zetsche K.;
"Organization and expression of a phycobiliprotein gene
the unicellular red alga Cyandium caldarium.";
Plant Mol. Biol. 20:267-276(1992)
- FUNCTION: REQUIRED DURING CYTOCHROME BIOGENESIS AT THEME ATTACHMENT (BY SIMILARITY).
- ISIMILARITY: BELONGS TO THE CCMF/CYCK/CCL1/NRFE/CCSA
                                                                                                                                                                              CCSA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Chloroplast
                                                                                                                             Eukaryota; stramenopiles;
Biddulphiophycidae; Eupod
                                                                                                                                                  Chloroplast
                                                                                                                                                                                                 01-FEB-1996
01-NOV-1997
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01-FEB-1996
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SEQUENCE
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Pfam; PF01578; CytC_asm; 1.
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       HEME ATTACHMENT (BY SIMILARITY).
SIMILARITY: BELONGS TO THE CCMF/CYCK/CCL1/NRFE/CCSA FAMILY
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$25309; $25309.
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C BIOGE
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35,
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                                                                                                                             piles; Bacillariophyta; Coscinodiscophyceae;
Eupodiscales; Eupodiscaceae; Odontella.
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                                                                                                                                                                                        PROTEIN
                                                                                                                                                                                                                                                                                                                                                        Score 37; DB Pred. No. 45; 2; Mismatches
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                                                                   Kroth-Pancic P.
L a+c-containing
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Best Local Similarity
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Q59935;
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                                                                                                                                                                                                                                                                                                                                    Sato Y., Yamamoto Y., Kizaki H., Kuramitsu H.K.;
"Isolation and sequence analysis of the pmi gene encoding
phosphomannose isomerase of Streptococcus mutans.";
FEMS Microbiol. Lett. 114:61-66(1993).
-I- CATALYTIC ACTIVITY: D-MANNOSE 6-PHOSPHATE = D-FRUCTOSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRMU
                                                                                                                                                                    EMBL; D16594; BAA04021.1;
                                                                                                                                                                                             entities requires a license agreement (S or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bacteria; Firmicutes; Streptococcus.
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                                                                                                                                              ram;
                                                                                                                                                         InterPro;
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                                                                                                                                                                                                                                                                                             COFACTOR: ZINC (BY SIMILARITY).
SIMILARITY: BELONGS TO FAMILY 1
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ATE ISOMERASE (EC 5.3.1.8) (PHOSPHOMANNOSE ISOMERASE)
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PMI_I_2;
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RESULT 19
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                                                                                    Coniferopsida; C
NCBI_TaxID=3350;
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01-NOV-1995 (Rel. 32, Last sequence update)
01-NOV-1997 (Rel. 35, Last annotation updat
CYTOCHROME C BIOGENESIS PROTEIN CCSA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro: IPR002541; -. Pfam; PF01578; CytC_asm; 1. Cytochrome c-type biogenesis; SEQUENCE 319 AA; 35213 MW;
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  MEDLINE=95024047; Pub
Wakasugi T., Tsudzuki
                                                                                                              Eukaryota; Viridiplantae; Embryophyta;
Coniferopsida; Coniferales; Pinaceae;
                                                                                                                                                        Pinus thunbergii (Green pine) (Japanese black pine).
Chloroplast
                                                                                                                                                                                                       CCSA.
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                                                                                                                                                                                                                                                                                                                                             CCSA_PINTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                              SEQUENCE FROM
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -1- SIMILARITY: BELONGS TO THE CCMF/CYCK/CCL1/NRFE/CCSA FAMILY.
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FUNCTION: REQUIRED DURING CYTOCHROME BIOGENESIS
HEME ATTACHMENT (BY SIMILARITY).
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PubMed=7937893;
zuki J., Ito S.,
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01-FEB-1996
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                                                                                     Pfam; PF01578; CytC_asm; 1.
Cytochrome c-type biogenesis;
SEQUENCE 322 AA; 37453 MW;
                                                                                                                                                                                            This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@fisb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                    Bryant D.A.;
Submitted (JUL-1995) to the EMBL/GenBank/DDBJ databases
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01-FEB-1996 (Rel. 33,
01-NOV-1997 (Rel. 35,
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-1- FUNCTION: REQUIRED DURING CYTOCHROME BIOGENESIS AT THE ST.
                                                                                                                                                                                                                                                                                                                                                                                                                               Stirewalt V.L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRAIN-LB555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=2762;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Glaucocystophyceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cyanelle.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Cyanophora paradoxa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CYTOCHROME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Cytochrome c-type biogenesis; Chloroplast. SEQUENCE 320 AA; 36262 MW; 12D641127F4B306E CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro; IPR002541;
Pfam; PF01578; CytC_a
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                                                                                                                                                                EMBL; U30821;
                                                                                                                                                 InterPro;
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                                                                                                                                                                                                                                                                                                                                           SIMILARITY: BELONGS
                                                                                                                                                                                                                                                                                                                                                          FUNCTION: REQUIRED DURING CYTOCHROME BIOGENESIS AT HEME ATTACHMENT (BY SIMILARITY).
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SIMILARITY: BELONGS TO THE CCMF/CYCK/CCL1/NRFE/CCSA FAMILY.
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4; Conserv
 Similarity 4; Conserv
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                                                                                                                                             IPR002541; -
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   Conservative
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Score 37; DB Pred. No. 47; 2; Mismatches
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01-FEB-1996 (Rel.
01-NOV-1997 (Rel.
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SMF_HAEIN STANDARD;
P43862;
01-NOV-1995 (Rel. 32, Created)
                                                                                                                                                                                                                                                                                                                                     EMBL; U15556; AAA76600.1; -.
EMBL; U09190; AAB03815.1; -.
InterPro; IPR002541; -.
Pfam; PF01578; CytC_asm; 1.
CytoChrome c-type biogenesis; Chloroplast.
CONFLICT 342 342 T -> I (IN REF. 2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "The plastid-encoded ccsA gene is chloroplast c-type cytochromes."; J. Biol. Chem. 271:4632-4639(1996)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       the European Bioinformatics Institute.

    -!- SIMILARITY: BELONGS TO THE CCMF/CYCK/CCL1/NRFE/CCSA FAMILY.
    -!- CAUTION: IT IS UNCERTAIN WHETHER MET-1 OR MET-20 IS THE INITIATOR.

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33, Last sequence update)
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a Chlamydomonas
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Chlamydomonas.
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Mismatches
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15-DEC-1998
SMF PROTEIN
SEQUENCE FROM N.A.
STRAIN-K12 / MG1655;
MEDLINE-97426617; PubMed-9278503;
Blattner F.R., Plunkett G. III, Bloch
                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL;
TIGR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Fleischmann R.D., Adams M.D., White O., Clayton R.A., Kirkness E.F., Kerlavage A.R., Bult C.J., Tomb J.-F., Dougherty B.A., Merrick J.M., McKenney K., Sutton G., Fitzhugh W., Fields C.A., Gocayne J.D., Scott J.D., Shirley R., Liu L.-I., Glodek A., Kelley J.M., Weidman J.F., Phillips C.A., Spriggs T., Hedblom E., Cotton M.D., Utterback T.R., Hanna M.C., Nguyen D.T., Saudek D.M., Brandon R.C., Fine L.D., Fritchman J.L., Fuhrmann J.L., Geoghagen N.S.M., Geoghagen N.S.M., Smith H.O., Weidman C.L., McDonald L.A., Small K.V., Fraser C.M., Smith H.O.,
                                                                                                                       YGIQ OR B3015/B3016.
Escherichia coli.
                                                                                                                                               01-NOV-1997 (Rel. 35, Created)
01-OCT-2000 (Rel. 40, Last sequence update)
01-OCT-2000 (Rel. 40, Last annotation update)
HYPOTHETICAL 83.5 KDA PROTEIN IN METC-SUFI INTERGENIC REGION
                                                                                                                                                                                                               YGIO_ECOLI
Q46861; Q46862;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Science 269:496-512(1995).
-!- FUNCTION: REQUIRED FOR CHROMOSOMAL BUT
-!- SIMILARITY: BELONGS TO THE SMF FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRAIN-RD / KW20 / AT Karudapuram S., Zhao Submitted (DEC-1994)
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                                                                            NCBI_TaxID=562;
                                                                                             Escherichia
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                                                                                                        Bacteria; Proteobacteria;
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3 TYGEYWA 129
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(Rel. 37, Last a
(DNA PROCESSING
                                                                                                                                                                                                                                                                                                                                                                    Conservative
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Zhao X., Barca
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37, Last annotation update)
PROCESSING CHAIN A).
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Unpublished .
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033317;
01-NOV-1997 (Rel. 35, Created)
11-NOV-1997 (Rel. 35, Last sequence update)
15-JUL-1999 (Rel. 38, Last annotation update)
15-JUL-1999 (Rel. 38, Last annotation update)
XYLANASE_BETA-GLUCANASE PRECURSOR [INCLUDES: ENDO-1,4-BETA-XYLANASE
XYLANASE_BETA-GLUCANASE); (ENDO-BETA-1,3-1,4 GLUCANASE) (EC 3.2.1.73)
(1,3-1,4-BETA-D-GLUCAN 4-GLUCANOHYDROLASE) (LICHENASE)].
                                                                                                                                          glucanase domains, encoded by the xynD flavefaciens.";
J. Bacteriol. 175:2943-2951(1993).
-i- FUNCTION: CONTAINS TWO CATALYTIC DO BETA-1,3-1,4 GLUCANASE ACTIVITIES.
-i- CATALYTIC ACTIVITY: ENDOHYDROLYSIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Entropean Bioinformatics Institute. There are no restructe by non-profit institutions as long as its content use by non-profit institutions as long as its content use by non-profit institutions as long as its content use by non-profit institutions as long as its content modified and this statement is not removed. Usage by and
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"The complete genome sequence
Science 277:1453-1474(1997).
                                                                                                                                                                                                                                                                       Flint H.J., Martin J., McPherson C.A., Daniel A "A bifunctional enzyme, with separate xylanase glucanase domains, encoded by the xynD gene of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EcoGene; EG13019; ygiQ.
Hypothetical protein.
SEQUENCE 739 AA; 835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; U28377; AAA69183:1; ALT_FRAME. EMBL; U28377; AAA69184:1; ALT_FRAME. EMBL; AE000383; AAC76052:1; ALT_FRAME. EMBL; AE000383; AAC76051:1; ALT_FRAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         entities requires a license agreement (S or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                    MEDLINE=93259938; PubMed=8491715;
                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=1265;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ruminococcus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bacteria;
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                                           LINKAGES IN XYLANS
CATALYTIC ACTIVITY: HYDROLYSIS OF
IN BETA D-GLUCANS CONTAINING 1,3-
PATHWAY: XYLAN DEGRADATION.
SIMILARITY:
G (FAMILY 1:
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ITY: TO M.JANNASCHII MJ1155.
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71.4%;
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                                                                                                                                                 S,
                                                                                                                                                                                                                                                                                                                          Daniel A.S.,
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                         BELONGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   group; Clostridiaceae;
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pfam; pF02010; CBD_6; 1.

pfam; pF00457; Glyco_hydro_16; 1.

pfam; pF00727; Glyco_hydro_16; 1.

pRINTS; pR00737; GLHYDRLASE16.

pRINTS; pR00931; GLHYDRLASE11

PROSITE; PS00776; GLYCOSYL_HYDROL_F11_1; 1.

pROSITE; PS01034; GLYCOSYL_HYDROL_F16; 1.

pROSITE; PS01034; GLYCOSYL_HYDROL_F16; 1.
SEQUENCE FACTOR 2661;
STRAIN-DSM 2661;
STRAIN-DSM 2661;
MEDLINE-95837999; PubMed-8688087;
MEDLINE-95837999; PubMed-8688087;
Bult C.J., White O., Olsen G.J., Zhou L., Fleischmann R.D.,
Sutton G.G., Blake J.A., Fitzgerald L.M., Clayton R.A., Gocayne J.D.,
Sutton G.G., Blake J.A., Fitzgerald L.M., Clayton R.A., Glodek C.I.,
Kerlavage A.R., Dougherty B.A., Tomb J.-F., Adams M.D., Reich C.I.,
Overbeek R., Kirkness E.F., Weinstock K.G., Merrick J.M., Glodek A.,
Scott J.L., Geoghagen N.S.M., Weidman J.F., Fuhrmann J.L., Nguyen D.
Utterback T.R., Kelley J.M., Peterson J.D., Sadow P.W., Hanna M.C.,
--+-~ M.D., Roberts K.M., Hurst M.A., Kaine B.P., Borodovsky M.,
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21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence update)
15-DEC-1998 (Rel. 37, Last annotation update)
15-DEC-1998 (Rel. 37, Last annotation update)
PHOSPHOLIPASE A2, BETA BUNGAROTOXIN A1 CHAIN (EC 3.1.1.4)
(PHOSPHATIDYLCHOLINE 2-ACYLHYDROLASE).
Bungarus multicinctus (Many-Danded krait).
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                         MEDLINE=82239269; PubMed=7096304;
Kondo K., Toda H., Narita K., Lee C.-Y.;
Kondo K., Toda H., Narita A., Lee C.-Y.;
"Amino acid sequence of beta 2-bungarotoxin from
multicinctus venom. The amino acid substitutions
J. Blochem. 91:1519-1530(1982).
                                                                                                                                                         MEDLINE=78109400; PubMed=624701;
Kondo K., Narita K., Lee C.-Y.;
Ramino acid sequences of the two polypeptide chains i
bungarotoxin from the venom of Bungarus multicinctus.
J. Blochem. 83:101-115(1978).
                                                                                                                                                                                                                                                                                      Lepidosauria; Squamata;
Elapidae; Bungarinae; Bu
NCBI_TaxID=8616;
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MEDLINE=79088714;
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-!- SIMILARITY: CONTAINS 5 PKD DOMAINS.
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                                                               chains.";
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21-JUL-1986 (Rel. 01, Last sequence update)
15-DEC-1998 (Rel. 37, Last annotation update)
15-DEC-1998 (Rel. 37, Last annotation update)
PHOSPHOLIPASE A2, BETA BUNGAROTOXIN A3 CHAIN
(PHOSPHATIDYLCHOLINE 2-ACYLHYDROLASE).
Bungarus multicinctus (Many-banded krait)
Bungarus multicinctus (Many-banded krait)
Eukaryota; Metazoa; Chordata; Craniata; Vertel
                                                                                                                                                                PA23_BUNMU
P00619;
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                          Elapidae; Bungarinae;
NCBI_TaxID=8616;
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                                                        Lepidosauria;
                                                                                                                                                                                                                                                                                                                                                                                                                      DISULFID
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PRINTS; PR00389; PHPHLIPASEA2.
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Eur. J. Biochem. 80:1-12(1977).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PROSITE; PS00119;
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SUBUNIT: DIMER OF DISSIMILAR CHAINS LINKED BY ONE OR MORE
DISULFIDE BONDS. THE A CHAINS HAVE PHOSPHOLIPASE A2 ACTIVITY AND
THE B CHAINS SHOW HOMOLOGY WITH THE BASIC PROTEASE INHIBITORS. THI
A1 CHAIN IS FOUND IN BETA-1 AND BETA-2 BURGAROTOXINS.

MISCELLANEOUS: LD(50) IS 0.019 M/G BY INTRAPERITONEAL INJECTION
IN BETA-1 BUNGAROTOXIN AND 0.28 MG/KG IN BETA-2.

SIMILARITY: BELONGS TO THE PHOSPHOLIPASE A2 FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FUNCTION: INHIBITS NEUROMÚSCULAR TRANSMISSION BY BLOCKING ACETYLCHOLINE RELEASE FROM THE NERVE TERMINI. ACT PRESYNA FUNCTION: PA2 CATALYZES THE CALCIUM-DEPENDENT HYDROLYSIS 2-ACYL GROUPS IN 3-SN-PHOSPHOGLYCERIDES.

CAPALYTIC ACTIVITY: PHOSPHATIDYLCHOLINE + H(2)0 = 1-ACYLG
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                                                                                                                                                                                                                                                    KTWGEY
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                                                                                                                                                                                                                                                                                                                      Similarity
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PS00119; PA2_ASP; 1.
                                                                                                                                                                                                                                                                                                                                                                                       neurotoxin.

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                                                    Squamata; Scleroglossa;
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                                                                                                                                                                                 STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            degradation;
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83.3%;
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                                       Bungarus
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CE6544CE62CA12C2 CRC64;
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II. Identification of the histidine
ified by p-bromophenacyl bromide.";
                                                      Serpentes;
                                                                                                                                                                                                                                                                                                                      DВ
27;
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                                                                 Vertebrata; Euteleostomi;
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                                                      Colubroidea;
                                                                                                            3.1.1.4)
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ACT PRESYNAPTICALLY
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"Nucleotide sequence encoding beta-bungarotoxin venom glands of Bungarus multicinctus."; Nucleic Acids Res. 18:4609-4609(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                    CA_BIND, SEQUENCE
                                                                                                                                                               21-JUL-1986 (Rel. 01, Created)
01-NOV-1990 (Rel. 16, Last sequence update
15-JUL-1999 (Rel. 38, Last annotation upda
PHOSPHOLIPASE A2, BETA BUNGAROTOXIN A2 CH
(PHOSPHATIDYLCHOLINE 2-ACYLHYDROLASE).
Bungarus multicinctus (Many-banded krait)
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J. Biochem. 91:1531-1548(1982).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Kondo K., Toda H., Narita K., Lee C.-Y.; "Amino acid sequences of three beta-bungarotoxins (beta 3-, and beta 5-bungarotoxins) from Bungarus multicinctus venom.
                                                                                                                           Eukaryota; Metazoa; Chordata;
Lepidosauria; Squamata; Sclerc
Elapidae; Bungarinae; Bungarus
                                                             TISSUE=Venom gland;
MEDLINE=90356416; PubMed=2388842;
                                                                                         SEQUENCE
                                                                                                                                                                                                                                             P00618;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRINTS; PR00389; PHPHLIPASEA2
PROSITE; PS00118; PA2_HIS; 1.
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HSSP; P15445; 1A3F.
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SUBUNIT: DIMER OF DISSIMILAR CHAINS LINKED BY ONE OR MORE DISSULFIDE BONDS. THE A CHAINS HAVE PHOSPHOLIPASE A ACTIVITY AND THE B CHAINS SHOW HOMOLOGY WITH THE BASIC PROTEASE INHIBITORS.
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                                                                                         FROM
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Lipid degradation;
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                                                                                                                                                                                                                                                                                                                                                                                                                                      AA;
                                                                                                                                                                                                                                                         STANDARD;
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83
                                                                                                                           Bungarus.
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Pred. No.
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                                                                                                                                       Serpentes;
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27;
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                                        A2-chain
                                                                                                                                          Colubroidea;
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ACT PRESYNAPTICALLY.
HYDROLYSIS OF THE
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MEDLINE=82239270; PubMed=7096305;

SEQUENCE OF 26-145

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RESULT 30
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AC. P17934
DT 01-NOV
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KONDO K., Toda H., Narita K., Lee C. 1...

"Amino acid sequences of three beta-bungarotoxins (beta 3-, beta 4-, and beta 5-bungarotoxins) from Bungarus multicinctus venom. Amino acid substitutions in the A chains.";

J. Biochem. 91:1531-1548(1982).

J. Biochem. 91:1531-1548(1982).

-i- FUNCTION: INHIBITS NEUROMUSCULAR TRANSMISSION BY BLOCKING TRANSMISSION BY BLOCKING.
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- I- FUNCTION: PA2 CATALYZES THE CALCIUM-DEPENDENT HYDROLYSIS OF THE
2-ACYL GROUPS IN 3-SN-PHOSPHOGLYCERIDES.

- I- CATALYTIC ACTIVITY: PHOSPHATIDYLCHOLLINE + H(2)O = 1-ACYLGLYCERYL-PHOSPHOCHOLINE + A FATTY ACID ANION.

- I- SUBUNIT: DIMER OF DISSIMILAR CHAINS LINKED BY ONE OR MORE
DISULFIDE BONNOS. THE A CHAINS HAVE PHOSPHOLIPASE A2 ACTIVITY AND
THE B CHAINS SHOW HOMOLOGY WITH THE BASIC PROTEASE INHIBITORS. THE
A2 CHAIN IS FOUND IN BETA-3 AND BETA-4 BUNGAROTOXINS.

- I- MISCELLANEOUS: LD(50) IS 0.066 MG/KG BY INTRAPERITONEAL INJECTION
IN BETA-3 BUNGAROTOXIN AND 0.073 MG/KG IN BETA-4.

- I- SIMILARITY: BELONGS TO THE PHOSPHOLIPASE A2 FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DISULFID DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial
                                  PA24_BUNMU
P17934;
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SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRINTS: PR00389; PHPHLIPASEA2.

PROSITE; PS00118; PA2_HIS; 1.

PROSITE; PS00119; PA2_ASP; 1.

Hydrolase; Lipid degradation; Calcium; Multigene family; Venom; Presynaptic neurotoxin; Signal.
01-NOV-1990 (Rel. 16, Created)
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15.-UL-1999 (Rel. 38, Last annotation update)
PHOSPHOLIPASE A2, BETA BUNGAROTOXIN A4 CHAIN PRECURSOR (EC 3.1.1.4)
(PHOSPHATIDYLCHOLINE 2-ACYLHYDROLASE).
Bungarus multicinctus (Many-banded krait).
Eukaryota; Metazoa; Chordata; Craniatta; Vertebrata; Euteleostomi;
Lepidosauria; Squamata; Scleroglossa; Serpentes; Colubroidea;
Elapidae; Bungarinae; Bungarus.
                                                                                                                                                                                                                                                                                                                                       the European Bioinformatics Institute. There are no rest use by non-profit institutions as long as its content modified and this statement is not removed. Usage by an entities requires a license agreement (See http://www.isborsend an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                          CHAIN
                                                                                                                                                                                                                                                           InterPro; IPR001211; -. Pfam; PF00068; phoslip; 1. PRINTS; PR00389; PHPHLIPASEA2.
                                                                                                                                                                                                                                                                                                       EMBL; X53408; CAA37484.1; PIR; S10982; PSKFA4.
                                                                                                                                                                                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bungarus multicinctus."
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TISSUE-Venom gland;
MEDLINE-90356417; P
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                                                       SEQUENCE
                                                                    CA_BIND
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SIGNAL
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PROSITE; PS00119;
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                                                                                                                                                                                                                            Hydrolase;
                                                                                                                                                                                         neurotoxin;
1 27
28 147
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                                                        147 AA;
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PA2_ASP;
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58
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16.365 Million cell updates/sec
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                                                                                              Melanoma associate
Immunogenic peptid
gp100/Pmel17 synth
PMEL 17 (GP100) pr
Melanoma-associate
Peptide 3 from gp
                Melanoma associate
Melanoma associate
Tumour antigenic p
Human melanoma pme
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[mmunogenic peptid
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49	50	50	50	50	50	52	52	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53
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AAY31978	AAR84854	AAR84208	AAB13727	AAY46537	AAW42542	AAW45776	AAW45775	AAW38164	AAY42627	AAY31977	AAR78646	AAR84855	AAB61647	AAR78642	AAR84209	AAR78643	AAB31354	AAY56614	AAY82979	AAY84296	AAY92299	AAY90803	AAB02622	AAY71520	AAB08694		AAB33662	AAY10449	AAY00715	AAY01753	AAY26867	4021	AAY33172
Mouse melanoma ant	MART-1 melanoma an	gp100 melanoma ant	Peptide fragment #	Immunogenic peptid	Gp 100 epitope (re	Melanoma associate	ma assoc	Pmel17 encoded by	Human melanoma ant	Human melanoma ant	Melanoma associate	MART-1 melanoma an	Gp100 peptide #1.	Immunogenic peptid	gp100 melanoma ant	Immunogenic peptid	ary antig		gp100(Pmel117) tum			Human leukocyte an	Tumour associated	0	pe	otoxic T	class I	HLA Class I motif		Exemplary antigeni	oma-di	-	Human gp100-Pmel11

## ALIGNMENTS

RESULT
AAW45771
ID AAW4
XX
AC AAW4
XX

AAW45771 standard; peptide;

9 A

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AAW45771;

Melanoma associated peptide analogue #2.

22-JUN-1998 (first entry)

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Claim 4; Figure 1; 47pp; English.
                 melanoma
                      Melanoma associated peptide analogues - useful in vaccines against
                                          WPI; 1998-110586/10.
                                                          Adema GJ, Figdor CG;
                                                                                           11-JUL-1996;
                                                                                                             08-JUL-1997;
                                                                                                                               22-JAN-1998
                                                                                                                                                WO9802538-A1
                                                                                                                                                               Homo sapiens.
                                                                                                                                                                        Synthetic
                                                                                                                                                                                        Metastatic melanoma; peptide analogue; vaccine; cancer; diagnosis; antigen; CTL; immunogenic; viral disease.
                                                                          (ALKU ) AKZO NOBEL NV.
                                                                                            96EP-0201945
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This sequence represents a specifically claimed example of a novel peptide, which is immunogenic with lymphocytes directed against metastatic melanomas. It is characterised in that it comprises at least a part of the following sequence, where the amino acid at position 2 or 8 is substituted: Lys-Thr-Trp-Gly-Gly-Tyr-Trp-Gly-Val. Vaccines comprising the peptide, an epitope of the peptide, nucleotide sequence encoding the peptide, or an antigen presenting cell preloaded with the peptide or antibody as above, are useful for cancer, particularly melanoma, treatment. The peptides can also be used to generate antigen reactive tumour infiltrating lymphocytes, which can also be used in vaccines. The peptides can be exploited to elicit native epitope-reactive CTL. Usage of the peptides with improved immunogenicity may contribute to the development of CTL-epitope based vaccines in viral disease and cancer.
                                   Immunogenic peptides derived from the melanoma associated antigen (See AAR78639-45) may be used in the production of vaccines. Nucleotide sequences encoding the immunogenic peptides may be used as primers and probes in the detection of melanoma cells. Tumour infiltrating lymphocytes capable of binding to the melanoma associated antigen can be cultured ex vivo and returned to melanor particles, and when radiolabelled, they may be used to identify
                                                                                                                                                                                                                                         WPI; 1995-284790/38
                                                                                                                                                                                                                                                                                                                          21-DEC-1994;
16-FEB-1994;
                           tumour deposits.
                                                                                                                                                       Claim
                                                                                                                                                                                  Melanoma associated antigen gp100 detection of tumours
                                                                                                                                                                                                                            N-PSDB;
                                                                                                                                                                                                                                                                     Adema
                                                                                                                                                                                                                                                                                              (ALKU ) AKZO NOBEL NV
                                                                                                                                                                                                                                                                                                                                                                    14-FEB-1995;
                                                                                                                                                                                                                                                                                                                                                                                               23-AUG-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Melanoma; antigen; vaccine; immunogen; primer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        22-JAN-1996
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   identification;
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                                                                                                                                                                                                                                                                  GJ, Figdor CG;
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                                                                                                                                                      31; 40pp;
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94EP-0200337.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tumour; gp100.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Protein;
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                                                                                                                                                      English.
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3.4e+05;
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                             AAW78850 standard; peptide;
                                                                                                                                                                                                                 response than the native epitope. The epitopes can be used in disease-specific immunogen to protect a mammal against disease particular melanomas. The peptides may also be used to screen a for the presence of an antigen with the same epitope, or with a
                                                                                                                                                                                                                                                              The peptide epitope AAW77119-W77138 were created for human tumour-specific cytotoxic T lymphocyte response. These peptides are are cysteine-depleted mutants of a native disease-specific CTL epitope. The cysteine-depleted CTL epitopes elicit a stronger or more specific CTL
                                                                                                                                                                                                                                                                                                                                          Disease specific immunogen \,\, comprises disease specific cytotoxic lymphocyte epitope used to elicit melanoma specific CTL response
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                                                                                                                                                                                     Sequence
                                                                                                                                                                                                          cross-reactive epitope
                                                                                                                                                                                                                                                                                                                      Disclosure;
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8; Conserv
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                                                                                                                                                                                                                                                                                                                      Page 27; 93pp; English
                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      lymphocyte; cysteine-depleted; melanoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tyrosinase cytotoxic lymphocyte response;
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                                                                                                                                          91.4%;
88.9%;
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                                                                                                                                          Score 53;
Pred. No.
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Pred. No.
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3.4e+05;
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                                                                                                                                         3.4e+05;
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                                                                                                                                                    DB 19;
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or with a different
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RESULT
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AC AAW7
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                                                                                                                                                                                                                                                                                             A microparticle preparation (MP) has been developed, consisting of CC microparticles having a diameter of less than 100 mu m. The MP CC comprises: (a) a polymeric matrix (PM) consisting of one or more CC synthetic polymers having a solubility in water of less that 1 mg/l; and CC (b) an expression vector selected from RNA molecules (at least 50% of which are closed circles) or circular plasmid DNA (at least 50% of which are supercoiled). Also described is a MP of at most 20 microns in CC diameter, comprising: (a) a PM; and (b) a NAM comprising an expression CC control sequence operatively linked to a coding sequence, where the CC coding sequence of: (i) a fragment of a naturally-occurring mammalian CC polypeptide at least 7 amino acids in length, having a sequence identical CC to the sequence of: (i) a fragment of a naturally-occurring mammalian CC infectious agent which infects a hammal; (2) a peptide having a length CC and (3) the polypeptide or the peptide linked to a trafficking sequence CC and 63 to AAW69765, and AAW78793 to AAW78897 are peptide fragments for CC use in the present invention. The MPs are highly effective vehicles for the delivery of polynucleotides into phagocytic cells. They can be used CC for gene therapy, e.g. for treating genetic diseases, infections or two two courses or for downregulating an immune response.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           06-JAN-1998;
22-JAN-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Microparticle; delivery; polymeric matrix; autoantigen; tumour antigen; class II associated peptide; pathogen; gene therapy; genetic disease; infection; downregulation; immune response.
 22-OCT-1998
                                                              AAW70010 standard; peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Disclosure; Page 10; 101pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gene
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Curley JM,
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                                AAW70010;
                                                                                                                                                                                                                                                                                             Sequence
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                                                                                                                                                                             1 KTWGQYWAV 9
                                                                                                                                           1 ktwgqywqv 9
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                                                                                                                                                                                                                                                                                             9 AA;
                                                                                                                                                                                                             Conservative
(first entry)
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97US-0787547.
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                                                                                                                                                                                                                           91.4%;
88.9%;
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                                                                                                                                                                                                                           Score 53; DB 19;
Pred. No. 3.4e+05;
                                                              B
                                                                                                                                                                                                             Mismatches

    comprising a synthetic polymer
an expression vector for use in

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                                                                                                                                                                                                                                          Length 9
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25-SEP-1998 AAW54598;

(first entry)

AAW54598

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AAW54598 standard;

peptide;

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                                                                                                                                                                                                                                                                                                                                                                                                            Sequences shown in AAW70010 to AAW70026 represent peptides derived from CC melanoma-associated antigen gpl00 that can bind to a human leukocyte antigen (HLA), HLA-A2.1. The peptides are used to exemplify the method CC antigen (HLA), HLA-A2.1. The peptides are used to exemplify the method CC of invention of producing antigen-specific cytotoxic T cells (CTLS) in CC vitro. The method comprises contacting immunogenic peptides from an CC antigen that binds class I major histocompatibility complex (MHC) CC molecules with antigen presenting cells (APCs) pretreated with purified CDB CC cells in the presence of at least 2 incubation growth factors, thereby CC cells in the presence of at least 2 incubation growth factors, thereby CC cells in the presence of at least 2 incubation growth Killing CC containing a fluid sample containing CTLs from a patient, contacting the CC cytotoxic T cells with APCs pretreated with pre-treatment growth CC factors, where the APCs comprise class I MHC molecules. The pretreated CC APCs are incubated with he cytotoxic growth factors, thereby producing activated CTLs which are contacted with a carrier to form a composition. CC TLS can be used for treating cancers, immune disorders, viral
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Production of antigen-specific cytotoxic T cells - by incubat immunogenic peptide(s) from antigen that binds class I major histocompatibility complex molecules with pre-treated antigen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Celis E,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          31-JAN-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         30-JAN-1998;
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                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                           infections, AIDS, hepatitis, malaria or tuberculosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Example 4; Page 62; 104pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 1998-437445/37.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (EPIM-) EPIMMUNE INC.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
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                                                                                                                                Conservative
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                                                                                                                                                                                                                                                                                                                                                                                     for treating cancers, immune dis, hepatitis, bacterial infection,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sidney
                                                                                                                                                              91.4%;
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                                                                                                                                0;
                                                                                                                                                              Score 53; DB 19;
Pred. No. 3.4e+05;
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                                                                                                                                Mismatches
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                                                                                                                                                                                            Length 9;
                                                                                                                                Indels
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RESULT
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Best Local
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                                                                                                       antigen; CTL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  02-APR-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Synthetic
          08-JUL-1997;
                              22-JAN-1998
                                                   W09802538-A1
                                                                                   Synthetic
                                                                                                                 Metastatic melanoma; peptide analogue; vaccine;
                                                                                                                                       Melanoma associated
                                                                                                                                                            22-JUN-1998
                                                                                                                                                                                AAW45777;
                                                                                                                                                                                                    AAW45777
                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Disclosure; Page 24; 47pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Increasing uptake and presentation of antigen(s) - by residue(s) to antigen for increasing T cell response, e.g. vaccines against viral infection(s)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 1998-230631/20.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Drijfhout JW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       26-SEP-1996;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                vaccine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mannose;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Peptide
                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                             responsiveness.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (UYLE-)
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                                                                                                                                                                                                                                                                 ktwgqywqv
                                                                                                                                                                                                                                                                                                                                                                         parasites.
                                                                                                                                                                                                                                                                                                 8;
                                                                                                                                                                                                                                                                                                            Similarity
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                                                                                                                                                                                                    standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         antigen; antigen-presenting cell; mannosylated peptide; T cell;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                treatment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               from
                                                                                                                                                                                                                                                                                                                                                                                  ness. Vaccines containing mannosylated antigen are used to treat infections by, e.g. bacteria, viruses, fungi, helmin
                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                           (first entry)
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                                                                                                       immunogenic; viral disease
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          97WO-EP03712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100/Pmel-17
                                                                                                                                                                                                   peptide;
                                                                                                                                    peptide analogue #8
                                                                                                                                                                                                                                                                                                           91.4%;
88.9%;
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                                                                                                                                                                                                                                                                                                 0;
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Pred.
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                                                                                                                                                                                                                                                                                                           53;
No.
                                                                                                                                                                                                                                                                                                            3.4e+05;
                                                                                                                                                                                                                                                                                                                      DB
                                                                                                                 cancer; diagnosis;
                                                                                                                                                                                                                                                                                                                    Length 9;
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useful
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        in,
                                                                                                                                                                                                                                                                                                                                                                                    helminths
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RESULT
AAW45770
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Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This sequence represents a specifically claimed example of a novel peptide, which is immunogenic with lymphocytes directed against metastatic melanomas. It is characterised in that it comprises at least a part of the following sequence, where the amino acid at position 2 or 8 is substituted: Lys-Thr-Trp-Gly-Gln-Tyr-Trp-Gln-Val. Vaccines comprising the peptide, an epitope of the peptide, nucleotide sequence encoding the peptide, or an antigen presenting cell preloaded with the peptide or antibody as above, are useful for cancer, particularly melanoma, treatment. The peptides can also be used to generate antigen reactive tumour infiltrating lymphocytes, which can also be used in vaccines. The peptides can be exploited to elicit native epitope-reactive CTL. Usage of the peptides with improved immunogenicity may contribute to the development of CTL-epitope based vaccines in viral disease and cancer.
                      melanoma
                                                                                                                                                                                                                                                                                                                                                                                      AAW45770 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 4; Page 35; 47pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Melanoma associated peptide analogues - useful in \operatorname{melanoma}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11-JUL-1996;
                                   Melanoma associated peptide analogues -
                                                            WPI; 1998-110586/10
                                                                                    Adema GJ,
                                                                                                                                      11-JUL-1996;
                                                                                                                                                             08-JUL-1997;
                                                                                                                                                                                                              WO9802538-A1
                                                                                                                                                                                                                                                                                                               Melanoma associated
                                                                                                                                                                                                                                                                                                                                        22-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                 AAW45770;
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                                                                                                           (ALKU ) AKZO NOBEL NV
                                                                                                                                                                                      22-JAN-1998.
                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                   Synthetic.
                                                                                                                                                                                                                                                                           antigen;
                                                                                                                                                                                                                                                                                      Metastatic melanoma; peptide analogue; vaccine; cancer; diagnosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (ALKU ) AKZO NOBEL NV
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8; Conserv
                                                                                                                                                                                                                                                                           CTL;
                                                                                  Figdor CG;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AA;
                                                                                                                                                                                                                                                                            immunogenic;
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                                                                                                                                      96EP-0201945
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                                                                                                                                                                                                                                                                                                                                                                                         peptide;
                                                                                                                                                                                                                                                                                                               peptide analogue
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88.9%;
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Pred. No.
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                                                                                                                                                                                                                                                                                                               #1.
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                                   useful in
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                                   vaccines against
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Claim 1; Figure 1; 47pp; English

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RESULF AAY49663 ID AAY4
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Best Local
The present invention describes sarcoma-associated gene products (1). Agents, specifically sarcoma associated nucleic acids (II) or their expression products that are tumour rejection antigens (TRA), that selectively increase formation of HLA (human leucocyte antigen)/(I) complexes are used for treating cancer, especially sarcoma and carcinoma, in humans and other annimals. Compositions containing autologous cytolytic T cells (CTL), specific for the HLA/(I) complex, are similarly useful, also transformed cells that stimulate such CTL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             15-APR-1998;
27-JUL-1998;
30-OCT-1998;
30-OCT-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This sequence represents a specifically claimed example of a novel peptide, which is immunogenic with lymphocytes directed against metastatic melanomas. It is characterised in that it comprises at least a part of the following sequence, where the amino acid at position 2 or 8 is substituted: Lys-Thr-Trp-Gly-Gly-Tyr-Trp-Gly-Val. Vaccines comprising the peptide, an epitope of the peptide, preloaded with the peptide or antibody as above, are useful for cancer, particularly melanoma, treatment. The peptides can also be used to generate antigen reactive tumour infiltrating lymphocytes, which can also be used in vaccines. The peptides can be exploited to elicit native epitope-reactive CTL. Usage of the peptides with improved immunogenicity may contribute to the
                                                                                                                                                                                                                                                                                                                                                                                   WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  carcinoma;
                                                                                                                                                                                                                                                Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                   Martelange V,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO9953061-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Synthetic
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAY49663 standard;
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nes 8; Conserv
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ma; cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sdph3.10;
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                                                                                                                                                                                                                                                                                                  e.g.
                                                                                                                                                                                                                                                                                                                              acid
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          98US-0060706.
98US-0122989.
98US-0183706.
98US-0183789.
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                                                                                                                                                                                                                                                                                               encoding treating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SAGE; sdp3.8; HAGE; sdp3.5; TRAP; sarcoma;
antigen precursor; tumour associated nucleic acid;
r; immune response; diagnosis.
                                                                                                                                                                                                                                                25;
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                                                                                                                                                                                                                                          93pp;
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88.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                   Ç
                                                                                                                                                                                                                                                                                                  sarcoma-associated gene products,
and preventing cancer -
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                                                                                                                                                                                                                                                English.
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Pred. No. 3.4e+05;
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RESULT
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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         in vivo. (II) are also used: (i) as source of therapeutic antisense sequences that reduce expression of (II); (ii) for recombinant production of (I); (iii) particularly its fragments, as primers and probes in usual hybridisation and amplification assays, for diagnosis, prognosis and monitoring of tumours, or for measuring binding specificity of HLA molecules or CTL clones; (iv) to identify related sequences; and (v) for generating transgenic animals, e.g. for studyin cancer and immune responses to it. (I) are used to raise specific antibodies (Ab) and therapeutically. Ab are used to diagnose tumours immunoassays, also for delivering drugs, toxins, imaging agents etc. t(I)-expressing cells. AN49637 to AN49670 represent exemplary tumour antigenic neptides given in the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                            Lipopeptide; epitopelectrical charge;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    18-JAN-2000
                                                                                                                          New lipopeptide containing lipid a separated by peptide spacers that vaccines
                                                                                                                                                                   WPI; 1999-583113/50
                                                                                                                                                                                         Le Gal
                                                                                                                                                                                                              (INRM )
(CNRS )
(INSP )
                                                                                                                                                                                                                                                            07-APR-1998;
                                                                                                                                                                                                                                                                                   07-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAY53524;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAY53524 standard;
                                                                                                                                                                                                                                                                                                         08-OCT-1999
                                                                                                                                                                                                                                                                                                                                FR2776926-A1
                                                                                                                                                                                                                                                                                                                                                                   Synthetic
                                                                                                                                                                                                                                                                                                                                                                                       melanoma; malaria; parasite
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                  human immunodeficiency virus; hepatitis B virus; papilloma virus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 KTWGQYWAV
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                                                                                                                                                                                                                                                                                                                                                                                                                                             melanoma
                                                                                                                                                                                         FA,
                                                                                                                                                                                                               INSERM INST NAT SANTE CNRS CENT NAT RECH SCI INST PASTEUR LILLE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
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                                                                                                                                                                                         Guillet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                            epitope; cytotoxic T harge; hydrophilicity;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
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                                                                                                                                                                                                                                                            98FR-0004323
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 53; DB 20;
Pred. No. 3.4e+05;
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                                                                                                                                                                                                                                       RECH MEDICALE
                                                                                                                                                                                                                                                                                                                                                                                                                       T lymphocyte;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
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t impart
                                                                                                                                                                                                                                                                                                                                                                                                            lymphocyte; CTL; lipid; vaccine; immune respons
                                                                                                                                                                                         Gras
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                                                                                                                                 and two epitopes, all hydrophilicity, useful
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                                                                                                                                                                                                                                                                                                                                                                                                                                              binds HLA-A2
                                                                                                                                                                                        Melnyk O,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 9;
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se; HIV;
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The invention relates to the generation of a lipopeptide comprising at least one auxiliary T epitope, at least one cytotoxic T lymphocyte (CTL) epitope and at least one lipid residue with (i) the epitopes and lipid portion and (ii) the epitopes, being separated independently by peptide spacers. These spacers comprise sequences of amino acids which carry an overall electrical charge in neutral media to ensure that the lipopeptide is hydrophilic. The peptides AAY53301-Y53549 represents

epitopes

used

generate

the lipopeptides.

These

Disclosure;

Page

24;

35pp;

French

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vaccines

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RESULT 1
AAY47616
                                      CC AAY45390 to AAY48214 represent specifically claimed immunogenic peptides CC having a human major histocompatibility complex (MHC) Class I (also CC known as human leukocyte antigen (HLA) binding motif. The immunogenic CC peptides can bind to a specific HLA allele (i.e. HLA-A subtypes CC HLA-A2.1, A1, A3.2 or A24.1 or HLA-B or C) and induce a cytotoxic T cell CC response against the antigen from which the peptide is derived. CC Cytotoxic T lymphocytes (CTLs) which destroy antigen-bearing cells are commally induced by an antigen in the form of a peptide fragment bound CC to a HLA molecule, rather than the intact foreign antigen itself, and CC are particularly important in tumour rejection and in fighting viral CC infections. The peptides are therefore useful therapeutically to treat CC or prevent viral infections and cancers in mammals (especially humans) CC e.g. prostate cancer, hepatitis B and C. AIDS, and renal carcinoma. CC They can be administered as vaccines to elicit an immune response in CC cancer, or used to treat chronic or acute conditions. They are also CC useful diagnostically, and can be used to induce a cytotoxic T cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
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response, by
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13-MAR-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        diagnosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        immunogenic peptides with HLA binding motif, diagnosis of cancers and viral diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1999-551214/46
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Page 116; 150pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Kubo RT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          peptide having a human leukocyte antigen binding motif #2227
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       contacting a cytotoxic T cell with the peptide e.g. to ex vivo for infusion back into a patient. The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
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88.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       activation; major histocompatibility con CTL; tumour rejection; viral infection; tis B; hepatitis C; AIDS; renal carcinoma
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Grey HM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 9;
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RESULT :
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                      CC enterocollitica yopeHoMP or Yersinia pseudotuberculosis yopeHaOJ; (2) an CC expression vector (EVI) for delivering a heterologous protein into a CC eukaryotic cell, comprising in the 5'-3' direction; (3) a Yersinia or CC eukaryotic cell, comprising ontacting the terologous protein into a cell with the above vector (Y1-EVI); (4) a method for delivering a eukaryotic cell, comprising contacting the cell with a Y1 transformed CC ell with a Y1 transformed with the above vector (Y1-EVI); (4) a method for delivering a CC cell with a Y1 transformed with the above vector (Y1-EVI); (5) a method CC inducing an immune response specific for a heterologous protein; (6) CC a method for inducing a cytotoxic T-lymphocyte (CTL) response specific CC for a heterologous protein; (7) a method for determining the efficacy of CC an antigen vaccination regimen in a subject Y1 is used to treat a CC pathological disorder, by providing recombinant Yersinia for the safe CC delivery of proteins into eukaryotic cells. ANY33147-Y33178 are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 8; Conserv
                                                                                                                                                                                                                                                          mutation(s) in effector-encoding gene(s) and deficient in the proof functional effector protein(s). The invention describes (1) a quintuple mutant Yersinia strain, having the designation Yersinia
                                                                                                                                                                                                                                                                                                          This invention describes a novel mutant Yersinia (Y1) strain,
                                                                                                                                                                                                                                                                                                                                                                      New mutant Yersinia strains useful
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            06-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          03-MAR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human; protein delivery; Yersinia sp.; effector gene; mutant; immune response; cytotoxic T-lymphocyte; CTL; vaccination; tropathological disorder; gp100-Pmel117.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             polynucleotides encoding the immunogenic peptides are also useful therapeutically and for immunisation as above.
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88.9%;
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                                                                                                                                                                                                                                                                                          production
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Query Match

Local

80 Similarity

Conservative

91.4%; 88.9%;

Score 53; DB 20; Pred. No. 3.4e+05;

Length 9,

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Mismatches

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ANY40123-Y40379 represent epitopes that are able to activate cytotoxic CC Tymphocytes (CD8+ epitopes), T helper cells (CD4+ epitopes), or CC Bepitopes recognized by corresponding antibodies. The epitopes may be CC used in the composition of the invention. The specification describes a CC lipopeptide that has a peptide part derived from mammallan interferon CC gamma (IFNg) and one or more lipophilic parts comprising a linear or CC branched, (un)saturated 4-20C hydrocarbyl chain or a steroid. The CC lipopeptide mimics the activity of IFNg. Compositions comprising the CC lipopeptide are used to treat or prevent any condition that responds CC to IFNg, and as adjuvant for vaccines (particularly those directed against tumors, viral or parasitic infections), to stimulate or CC (re)orient the immune response between types 1 and 2 cytokine profiles. CC Particular applications are treatment of infections (particularly coviral, e.g. acquired immune deficiency syndrome, papilloma (cancer) and hepatitis, but also bacterial, fungal, parasitic or helminth); cancers (particularly of kidney, cutaneous T cells or ovary, chronic myelogenous leukemia or mesothelioma), allergy; and autoimmune
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                                                                                                                                                                                                                                                                                                                                                                           New lipopeptide comprising C-terminal interferon-gamma fragment with attached lipophilic groups, used as interferon mimic, e.g. for treat: cancer or virus infection
                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      autoimmune disease.
                                                                                                                                                                                                                                                                                                                                           Disclosure; Page 35; 53pp; French
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Thiam K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          06-FEB-1998;
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 Sequence
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(INSP ) INST PASTEUR LILLE.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   of a human melanoma epitope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ver Waerde C,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     hepatitis;
                                                                                                                                                                                                                                                                                                                                                                                            for treating
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Query Match

91

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53;

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9

RESULT AAY01753

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ktwgqywqv 9

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RESULT
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Best Local
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Matches 8; Conserv
                                       Matches
                                                                                                                                                                                  The invention relates to the generation of mixed micelles or microaggregates for inducing an immune response comprise: (a) a first lipopeptide comprising at least one CTL (cytotoxic T-lymphocyte) epitope and at least one lipid unit; and (b) a second lipopeptide comprising at least one HTL (helper T-lymphocyte) epitope and at least one lipid unit different from that of the first lipopeptide. This peptide represents an example of a lipopeptide epitope used in the invention and is derived from a human melanoma protein. The immunogenic lipopeptide micelles are used in vaccines, especially against HTV, hepatitis B virus (HBV), papilloma viruses, p53, melanoma or Plasmodium falciparum malaria.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Micelle; microaggregate; induction; immune response; lipopeptide; cytotoxic T-lymphocyte; epitope; lipid; helper T-lymphocyte; HTL; tetanus; toxin; vaccine; HIV; hepatitis B virus; papilloma virus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Immunogenic lipopeptide micelles - comprising lipopeptides containing cytotoxic and helper T-lymphocyte epitopes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 1999-349509/30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (CNRS ) CNRS CENT NAT RECH SCI. (INRM ) INSERM INST NAT SANTE & RECH MEDICALE. (INSP ) INST PASTEUR LILLE.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAY26867
                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                         Disclosure;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bossus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FR2771640-A1
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1 KTWGQYWAV 9
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8; Conserv
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Wieruszeski JM;
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                                                           91.4%;
88.9%;
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0; Mismatches 1;
                                                           Score 53; DB 20;
Pred. No..3.4e+05;
                                       Mismatches
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                                                                               Length 9;
                                       Indels
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                                       Gaps
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HBV;
p53;
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AAY01753 standard;

Peptide; 9 AA

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RESULT 16
AAY00715
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Best Local
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leukocyte
allograft
          Tumour antigen; booster peptide; immune response modulation; allergy; immune response enhancer; tumour cell; tumour rejection antigen; leukocyte antigen-presenting molecule; autoimmune disease;
                                                                                                                                                                                                                                                                                                                                                               antigen. The specification describes a MAGE-3 tumour associated gene. Peptides (AAY01721-25) that bind human leucocyte antigen (HIA) Class molecules can be derived from the MAGE-3 protein. These peptides and autologous CD4+ cells that bind to a complex of MAGE-3 peptide and HIA Class II, are used to treat MAGE-3 related diseases, particularly cancers (e.g. melanoma, osteosarcoma, leukemia and various forms of carcinoma). The peptides are also used to produce
                                                          Tumour antigen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              osteosarcoma;
                                                                                    12-MAY-1999
                                                                                                                                   AAY00715 standard;
                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                        various forms of carcinoma). The peptides are also used to produce specific antibodies. Detection of of the peptides, e.g. in binding assays, particularly with antibodies, is used for diagnosis of such
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Disclosure; Page 29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 1999-244031/20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        12-SEP-1997;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MAGE-3; tumour associated gene; human autologous CD4+ cell; MAGE-3 related d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Exemplary antigenic peptide derived from gp100(Pmell17).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     25-JUN-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                    The present sequence represents an exemplary tumour associated peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Isolated peptides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Luiten
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (LUDW-) LUDWIG INST CANCER RES (UYVR-) UNIV VRIJE BRUSSEL.
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                                                                                                                                                                                                                                            Local Similarity
nes 8; Conser
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               leukemia; carcinoma
                                                         booster peptide gp100Pmel117 HLA-A2
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obant V, T
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                                                                                                                                   peptide; 9 AA
                                                                                                                                                                                                                                                          91.4%;
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Thielemans
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             to human leucocyte antigen class
                                                                                                                                                                                                                                                          Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          related disease;
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                                                                                                                                                                                                                                                                      DB 20;
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Van Der
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cancer;
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Bruggen
                                                                                                                                                                                                                                                                    Length 9;
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                                                                                                                                                                                                                                                AAY10449
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Best Local S
Matches 8
                                                                                 Cytotoxic T-lymphocyte response; CTL; antigen; lymphatic immunisation; tumour; infectious disease; immunotherapy; malignant melanoma; viral disease; hepatitis; AIDS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            enhance the immune response against tumour cells expressing tumour rejection antigens, and against pathogens in subjects having human leukocyte antigen-presenting molecules. Method (B) is used to reduce the immune response in allergy, autoimmune disease, and allograft rejection. Method (A) provides an immunisation method which, unlike prior art, is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 comprising a peptide including the antigen, in an adjuvant, in amount effective to enhance the initial immune response; or (B) reducing an immune response as defined for (A) but using a non-adjuvant with the peptide which includes the antigen, in an effective to reduce the initial immune response. Method (A) is
                                                        Synthetic
                                                                                                                                                                                                      AAY10449;
                                                                                                                                                                                                                                AAY10449 standard; Peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      immune response in a mammal against an antigen, and comprises:
(A) inducing an immune response by: (i) administering a virus containing a nucleic acid molecule encoding the antigen or its precursor to generate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Disclosure; Page 10; 33pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       against antigen, e.g. enhancing
                                                                                                                                           HLA Class I motif peptide SEQ ID
                                                                                                                                                                         12-MAY-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         expressing tumour rejection antigens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Immunization methods using viruses expressing antigen for priming and booster immunizations - useful for modulating immune response
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                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 not limited
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          an immune response; and (ii) administering at least one booster dose
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                                                                                                                                                                                                                                                                                                                                    1 KTWGQYWAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sequence represents a tumour antigen booster peptide that can be in the method of the invention. The method is for for modulating
                                                                                                                                                                                                                                                                                                       Similarity 88.88; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              the level of the antigen in the mammal's lymphatic system to maintain the immunologic CTL response. The method can be used for the delivery of e.g. a differentiation antigen, a tumour-specific multilineage antigen, an embryonic antigen, an oncogene antigen, a mutated tumour-suppressor gene antigen, or a viral antigen. They can be used for the treatment of disease such as cancer, e.g. malignant melanoma or infectious disease, e.g. viral disease such as hepatitis or AIDS. Sustained antigen delivery to the lymphatic system provides for potent CTL stimulation that takes place in the milieu of the lymphoid organ, and it sustains stimulation that is necessary to keep CTL active, Cytotoxic and recirculating through the body. AAV10071 to AAV10639 represent examples of peptide antigens given in the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The present invention describes a method of inducing and/or sustaining an immunological cytotoxic T lymphocyte (CTL) response in a mammal. The method comprises: (a) delivering an antigen to the mammal at a level to induce an immunological CTL response in the mammal; and (b) maintaining
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Inducing a cytotoxic T lymphocyte response - by maintaining a level of antigen in the lymphatic system of a mammal so as to provide a sustained CTL response, used to treat, e.g. AIDS
                                                                                                                                                                                                                                                                                                                                                                                        Microparticle; nucleic acid delive major histocompatibility complex;
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                                                           11-MAR-1999;
27-MAY-1999;
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                                                                                                                                                                                                                                                                                                                                      Unidentified
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10-JUL-1997;
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(ZYCO-) ZYCOS
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                                                                                                                                                                                                                                                                                                                                                                                        nucleic acid delivery; immunogenic peptide; MHC I; MHC patibility complex; vaginal tissue; mucosal tissue..
                                                           99US-0266463
99US-0321346
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97CA-2209815
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88.9%;
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                                                                                                                                                                                                                                                                                                                                                                      Cytotoxic T lymphocyte (CTL)
                                                                                                                                                                                                                                                                                                                                                                                                  05-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The present invention relates to microparticles which are less than microns in diameter, which comprise a polymeric matrix, a lipid and nucleic acid molecule. The microparticle is specifically not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Microparticles useful for administering a nucleic acid into the mucosal tissue preferably vaginal tissue of an animal, comprises a polymeric matrix, a lipid and a nucleic acid molecule
                                                                                                                                                       19-FEB-1999;
                                                                                                                                                                                                                                                                    Homo sapiens.
                                                                                                                                                                                                                                                                                                                 cytostatic;
                                                                                                                                                                                                                                                                                                                           ATPase; Hsp70; heat shock protein; cytotoxic T lymphocyte; CTL; immune response; infectious disease; malaria; cytotoxic T cell;
                                                                                                                                                                                                                                                                                                                                                                                                                              AAB23679;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAB23679 standard; Peptide;
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                                                                                                                          (SUME ) SUMITOMO ELECTRIC IND
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                                                                                                                                                                                                                                                                                                  protozoacide;
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                                                                                                                                                                                                                                                                                                              immunostimulant; cellular immune response inducer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Page 14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                              Udono H,
                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
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                                                                                                                                                                                                                                                                                                  leukaemia;
                                                                                                                                                       99JP-0041535.
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Pred. No. 3.4e+05;
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Fused protein capable of inducing cellular immune response, active ingredient for drug compositions in preventing and/omegations diseases such as malaria or cancer -

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peptide containing a CTL (cytotoxic T lymphocyte) epitona cytotoxic T cells and a protein containing and a protein containing and a protein contain protein contain and a protein contain cont

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Matches
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CD4+ T
leukocyte antigen) class II-binding peptide. EphA3 antigens, when presented by an antigen presenting cell having a HLA class II molecule, effectively induce activation and proliferation of CD4+ T lymphocytes. EphA3 is a tumour associated gene. EphA3 HLA binding peptides are used for selectively enriching a population of T lymphocytes. The peptides are also used for diagnosing a disorder characterized by EphA3 or EphA3
                                                                                                                                                  The peptides may be combined in
                                                                                                                                                                                                                      Disclosure; Page
                                                                                                                                                                                                                                                                                                                                             Novel
                                                                                                                                                                                                                                                                                                                                                                                                                                       Chiari R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     22-FEB-1999;
08-OCT-1999;
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                                                                                                                                                                      AAB08668-B08704 represent antigenic peptides characteristic
                                                                                                                                                                                                                                                                            for diagnosing
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                                                                                                                                                                                                                                                                                      tyrosine kinase receptor, EphA3 human leukocyte antigen (HLA) II binding peptide and nucleic acid encoding the receptor, usef iagnosing and treating conditions characterized by expression of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HLA class II-binding peptide; human leukocyte antigen; antigen; lymphocyte; tumour associated gene; vaccine.
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                                                                                                                                                                                                                                                                                                                                                                                                                                       Coulie P,
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99US-0158566
                                                                                                                                                                                                                        35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    from tumour rejection antigen gp100(Pmel117).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Peptide; 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 entry)
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                                                                                                                                                                                                                      107pp;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 53; DB
Pred. No. 3.4e
0; Mismatches
                                                                                                                                                                                                                      English
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                                                                                                                                                vaccines with a human EphA3 HLA (human
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Best Local S
Matches 8
                                                                 The patent discloses MAGE-A10 and MAGE-A8 polypeptide, nonapeptide and decapeptide sequences, that function as tumour rejection antigens (TRAs). These peptides are capable of forming a complex with major histocompatibility complex (MHC) molecule type HLA-A2.1 (Human Leucocyte Antigen), that are recognised by T-lymphocytes and elicit an immune response from cytolytic T-lymphocytes (CTL). They function as an immune response stimulator. Tumour rejection antigens are useful in prophylaxis, therapy and diagnosis of tumours and are effective in controlling or preventing tumour growth. The present sequence is the human gp100 Pmel117 nonapeptide-1, that corresponds to residues 154-162 of the tumour associated gene, gp100 Pmel117 encoding protein. It can be administered to induce or enhance an immune response and is presented by HLA-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gp100 Pmel117; human; Tumour Rejection Antigen; TRA; tumour; cancer; HLA; Human Leucocyte Antigen; MHC; Major Histocompatibility Complex; cytolytic T-lymphocyte; immune response stimulator; prophylaxis; thei diagnosis; TNF; tumour necrosis factor; vaccine; cytostatic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HLA binding peptide expression. The peptides are also used to treat disorder characterized by EphA3 expression. The EphA3 binding peptides are also used to treat
                                                                                                                                                                                                                                                                                                Novel polypeptides expressed in tumor cells useful for treating cancers have an ability to complex with a major histocompatibility complex molecule and comprises a specific unbroken amino acid sequence -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAY71520
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                                                                                                                                                                                                                                                                       Disclosure;
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                                                                                                                                                                                                                                                                                                                                                                                                                         (LUDW-) LUDWIG INST CANCER RES
                             variety
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                                           combination
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8; Conser
                                    This peptide can serve as a tumour rejection antignation with adjuvants, can produce vaccines useful
                             of.
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                                                                                                                                                                                                                                                                       Page 20;
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88
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                                                                                                                                                                                                                                                                       English.
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Pred. No.
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                                                        a tumour rejection antigen
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Sequence

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RESULT 2
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Matches 8
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Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Chaux P, Sc. Schultz ES,
                                                                                                                                                        to create antibodies against the MAGE-A3 peptides, the antibodies, peptides and nucleotide sequences can be used to create a vaccine. The peptides are used to diagnose or treat a disorder characterized by expression of MAGE-3, particularly cancer. The methods can also be used in the diagnosis of disorders associated with MAGE-3 expression. Included in the invention are other human tumour antigens (see AAB02596-B02637), and PCR primers used in the course of the invention (see AAA37929-A37937).
                                                                                                                                                                                                                                                    cells in the context of HLA class II molecules. The peptides stimulate the activity and proliferation of CD4+ T lymphocytes. The invention also includes nucleotide sequences encoding MAGE-3A peptides (see AAA37928 and AAA37938-A37940). The peptides and nucleotide sequences can be used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (LUDW-)
(UYVR-)
                                                                                                                                                                                                                                                                                          product) human leukocyte antigen (HLA) class II-binding peptides (see AAB02566-B02595, and AAB02633-B02637). These peptides are presented to T cells in the context of HLA class II molecules. The peptides stimulate
                                                                                                                                                                                                                                                                                                                                                                                            New MAGE-A3 class II binding peptides, useful to diagnose and treat tumours, are fragments of MAGE-A3 which bind to and are presented to T lymphocytes by human leukocyte antigen class II molecules -
                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                          The
                                                                                                                                                                                                                                                                                                                                                                 Disclosure; Page 33; 119pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2000-317713/27.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MAGE-A3; HLA class cancer; human; tumc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tumour associated
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| ktwgqywqv 9
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 KTWGQYWAV 9
                                                                                                                                           PCR primers used in the AAA37941-A37942).
                                                                                                                                                                                                                                                                                                                                      present invention relates to MAGE-A3 (tumour associated gene
                          KTWGQYWAV 9
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                                                  Similarity
8; Conser
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S, Van Snick
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                                                    Conservative
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                                                                                                                     AΑ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             tumour;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   peptide antigen from gp100
                                                                 91.4%;
88.9%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tumour associated gene pr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Boon-Falleur T, Van Der Bruggen P;
J, Lethe B, Thielemans K, Corthals
                                                  Score 53; DB Pred. No. 3.4e 0; Mismatches
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                                                                             DB 21;
                                                                  .4e+05;
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                                                                         Length 9;
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                                                  Gaps
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RESULT 23
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Matches 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         peptides of the invention can be used to generate immune responses, preferably in humans, but also in non-human animals to generated immune components which can then be used to treat humans or diagnostically. Therapeutically, the peptides are useful in generation of cytolytic T cells either in vitro or in vivo which specifically lyse pathogenic cells. The peptides can also be used to identify HIA-B35 positive cells, or to remove HIA-B25 positive cells from mixtures containing such cells. Nucleic acid molecules encoding the peptides can be used inter alia as probes to identify cells which are expressing tyrosinase. The present sequence represents an HIA binding peptide used in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         isolated peptides, sometimes derived from tyrosinase, which bind to HLA-B35 leading to recognition and lysis of the resulting complexes cytolytic T cells -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The present invention describes isolated peptides which bind to human leukocyte antigen (HLA)-B35 molecules leading to recognition and lysis of the resulting complexes by cytolytic T cells. The isolated peptides are sometimes derived from tyrosinase. Compositions comprising the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human leukocyte antigen; HLA-B35;
cytolytic T cell; tyrosinase; immu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAY90803 standard;
                                                                               AAY92299;
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                                                                                                                                peptide;
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10-AUG-2000

(first entry)

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gp100-Pmell17 antigenic

peptide epitope (residues 154-162).

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Best Local
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                                                                                                                                                                                                                                     A novel method of isolation of cytotoxic T-lymphocytes (CTL) clones comprises successive steps of stimulation and testing of lymphocytes with antigen presenting cells (APCs) which present antigens derived from different expression systems. The CTL clones isolated recognize specific antigenic peptides of proteins, preferably of the MAGE family. The APC is autologous and each expression systems is different from at least one of the other expression systems, therefore isolating a cytotoxic T cell clone specific for the protein. The method can also be used to identify an antigenic peptide epitope. Isolated CTL clones specific for a peptide/human leukocyte antigen (HLA) complex are claimed. The CTL cells specific for the complexes, peptides or cells which present the complexes on the cell surface are useful for treating pathological conditions characterized by abnormal expression of the complexes.
          12-JUL-2000
                                 AAY84296;
                                                                                                                                                                                                                                                                                                                                                                                                        Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                            Isolation of cytotoxic \mathbb{T}-lymphocytes clones by successive steps of stimulation and testing of lymphocytes with antigen presenting cel which present antigens derived from different expression systems
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09-APR-1999;
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                                                      AAY84296 standard;
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DUFFOUR M.
LURQUIN C.
TRAVERSARI C.
STROOBANT V.
CORNELIS G R.
BOON-FALLEUR T.
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V, Cornelis
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; HLA.
                                                                                                                                                            Score 53; DB Pred. No. 3.4e 0; Mismatches
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Boon-Falleur
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3.4e+05;
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  treatment;
testis; ant
GnT-V; MUM;
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Tumour; tumour associated antigen; retrovirus; antisense; treatment; probe; primer; HLA; cytotoxic T-lymphocyte; cancer; testis; antibody; CTL; helper T-lymphocyte; MAGE; BAGE; GAGE; I tribody; CTL; beta catenin; tyrosinase; Melan-A; gp100; PRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Isolated polypeptide used to treat subjects having a disorder characterized by expression of alternative open reading frame macrophage-colony stimulating factor comprises 25 amino acid:
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                                                                                                                               gp100(Pmel117)
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sequence -
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RESULT
AAY56614
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CC or by administering autologous cytotoxic T-cells sufficient to
CC ameliorate the disorder. Fragments of the HERV-AVL3-B coding sequence
CC are useful as probes or amplification primers for determining the
CC expression of HERV-AVL3-B genes, to express tumor associated
CC polypeptides in vivo and in vitro and to prepare fragments of such
CC polypeptides to synthesize antibodies. Antigenic peptides of such
CC polypeptides as components of immunoassay and for determining
CC the binding specificity of HLA molecules and/or cytotoxic T
CC lymphocyte (CTL) for HERV-AVL3-B proteins. Peptides derived from
CC the HERV-AVL3-B coding sequence and which are presented by MHC
CC molecules and recognised by CTL or helper T-lymphocytes can be
CC combined with peptides from other tumour rejection antigens by
CC preparation of hybrid nucleic acids or polypeptides to produce
CC polytopes. This exemplary tumour associated peptide antigen
CC corresponds to amino acids 154-162 of the gpl00(Pmell17) polypeptide.
CC see also AAY82953-Y82986.
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                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 8
HLA-A*0201; human leukocyte antigen; cytolytic T cell; CTL; tumour; Melan-A; peripheral blood lymphocyte; PBL; immune complex; melanoma MHC molecule; beta2-microglobulin; cytotoxic T lymphocyte; vaccine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tumour associated genes such as HERV-AVL3-B. Progression of a disorder characterized by the expression of the HERV-AVL3-B endogenous retrovirus tumor rejection antigen (ERTRA) can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tumor associated disorders (e.g. endogenous retrovirus mediated tumors, especially melanomas) can be treated or ameliorated by administering antisense nucleic acid to reduce the expression o
                                                                   gp100-Pmel-117 gene MHC molecule HLA-A2 peptide SEQ ID NO:30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       diagnosed or monitored by contacting a non-testis biological
                                                                                                                                                 AAY56614;
                                                                                                                                                                               AAY56614 standard; peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sample with an agent that binds to the complex and determining
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                                                                                                                                                                                                                                                                                                                                                Local Similarity les 8; Conserv
                                                                                                                                                                                                                                                                                           1 KTWGQYWAV 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   e interaction. A disorder can also be treated by administering agent that enriches the presence of HLA and HERV-AVL3-B ERTRA
                                                                                                                                                                                                                                                                          ktwgqywqv 9
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                                                                                                         entry)
                                                                                                                                                                                                                                                                                                                                                               91.4%;
88.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   77pp; English.
                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                             Score 53;
Pred. No.
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                                                                                                                                                                                                                                                                                                                                                 Mismatches
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3.4e+05;
                                                                                                                                                                                                                                                                                                                                                                                  Length 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          endogenous retrovirus
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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                          for monitoring vaccine trials. Particularly they are used to isolate or detect particular CTL (especially those in tumour-infiltrated lymph nodes), including visualisation of antigen-specific CTL and determination if the cells have been activated by in vivo exposure to antigen. Isolated precursor cells may be expanded in vitro to produce cells with high tumouricidal activity, for therapeutic or diagnostic use. A method from the present invention allows: (1) preselection of T cell clones for use in immunotherapy according to their homing molecules; and (ii) improves the lytic activity of T cells populations by inhibition of natural killer cell receptors. The present sequence represents a peptide used in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           first and second binding partners (BP1, BP2); and (ii) several immune complexes (IC) containing a major histocompatibility complex (MHC) molecule (1), a beta2-microglobulin molecule (bZMG) and a peptide (II) that binds specifically to (I). (A) are used for analysis of cytolytic T cells (CTL) for characterisation of an immune response to tumours or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              immune response; cancer; tyrosinase; tumour rejection antigen;
major histocompatibility complex.
                                        MAGE-A1; HLA; human leukocyte antigen; CD4+ T
MAGE-A1 HLA class II-binding protein; vaccine.
                                                                                                                 20-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New isolated complex of binding partners and immune complexes containing major histocompatibility molecules and peptide, us isolate and detect cytotoxic T cells, particularly directed a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     W09950637-A2
                                                                                   Exemplary antigen characteristic of tumours, derived from
                                                                                                                                              AAB31354;
                                                                                                                                                                            AAB31354 standard;
                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The present invention describes an isolated complex (A)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Example
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2000-052636/04
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                                                                                                                                                                                                                                                                                                           Similarity 88.9
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                                                                                                               (first entry)
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                                                                                                                                                                         peptide;
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                                                    lymphocyte;
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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             of tumours. They can be used to enhance the immune response of vaccines comprising peptides derived from human MAGE-A1 HLA (human leukocyte antigen) class II-binding protein. Peptides derived from the MAGE-A1 HLA binding protein stimulate the activity and proliferation of CD4+ T lymphocytes. The MAGE-A1 HLA binding protein is useful as a diagnostic agent for diagnosing a disorder characterized by expression of MAGE-A1. The protein is used for treating a disorder characterized by expression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               of MAGE-Al such as cancers e.g. melanomal, squamous cell carcinomas, colorectal carcinomas, osteosarcomas, and lymphocytic leukemias. Peptides derived from the MAGE-Al HLA binding protein are useful in production of anti-tumour vaccines.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Novel MAGE-Al human leukocyte antigen class II peptides which bind to and are presented to the class II molecules, useful for inducing immune response and treating cancers characterized by expression of MAGE-Al -
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                        Adema
                                                                                                                             21-DEC-1994;
16-FEB-1994;
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                                                                           (ALKU ) AKZO NOBEL NV
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                                                                                                                                                                                                                                                                                                                                                                                                                                          Melanoma; antigen;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Immunogenic peptide
                                                                                                                                                                                                                                                                                                                                                                                                                    identification;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ktwgqywqv
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                          g,
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                          Figdor CG;
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94EP-0200337
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                                                                                                                                                                                                                                                                                                                                                                                                                  tumour;
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Matches 8
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                 melanoma antigen derivative of gp100 (see AAR84855). The peptide and its derivatives (see AAR84200-R84211) are used medicaments (vaccines) for the treatment or prevention (by
                                                                                                                                                                                                                                                                                                                                                                     gp100; melanoma antigen recognised by T-cells; MART; melanoma;
metastatic melanoma; tumour-associated antigen;
immunogenic peptide; diagnosis; prognosis; prophylaxis;
                                                                                                    DNA encoding melanoma antigens recognised by T-lymphocytes - also vectors, host cells and antibodies, used to detect, treat and immunise animal against melanoma.
                                                                                                                                                                                                                                                                                                                                     Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                     gp100 melanoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAR84209 standard; Peptide;
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                                                      The immunogenic peptide is derived from cDNA25 (AAR84854),
                                                                               Claim 55;
                                                                                                                                                      WPI; 1995-382963/49
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22-APR-1994;
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                                                                                                                                                                                                                                                                                                                                                           therapy; vaccine.
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                                                                              Page 131; 184pp;
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peptides may be used
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immunogenic

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CC detection and isolation of the antigen from a sample, the CC detection of which is indicative of a disease state CC (melanoma or metastatic melanoma).

XX

SQ Sequence 10 AA;

Query Match
Best Local Similarity 88.9%; Pred. No. 0.013;
Matches 8; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Matches 8; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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## ALIGNMENTS

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Q9DWY8
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EMBL; D90910; BAA17891.1; -.
Hypothetical protein.
SEQUENCE 209 AA; 24511 MW; OAA7432F010D888F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.

MEDLINE=97061201; PubMed=8905231;

Kaneko T., Sato S., Kotani H., Tanaka A., Asamizu E., Nakamura Y.,

Miyajima N., Hirosawa M., Sugiura M., Sasamoto S., Kimura T.,

Miyajima N., Matsuno A., Muraki A., Nakazaki N., Naruo K., Okumura S.,

Hosouchi T., Matsuno A., Muraki A., Nakazaki N., Varuo K., Okumura S.,

Shimpo S., Takeuchi C., Wada T., Watanabe A., Yamada M., Yasuda M.,

Tabata S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-FEB-1997 (TrEMBLrel. 02, Created)
01-FEB-1997 (TrEMBLrel. 02, Last sequence up
01-JUN-2000 (TrEMBLrel. 14, Last annotation
HYPOTHETICAL 24.5 KDA PROTEIN.
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Bacteria; Cyanobacteria; Chroococcales; Synechocystis
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EMBL; U77932; AAC32040.1;
HSSP; P00787; 1THE
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Smythe M.L., Mcmanus D.P.,
"Proteolytic degradation of P
Mol. Biochem. Parasitol. 89:1
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Viruses; dsDNA viruses,
Papillomavirus.
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PROSITE; PS00139; THIOL_PROTEASE_CYS; PROSITE; PS00639; THIOL_PROTEASE_HIS; Hydrolase; Signal; Thiol protease.
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Pfam; PF00112; Peptidase_C1; 1.
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01-MAR-2001 (TrEMBLrel.
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Trematoda; Digenea;
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     Conservative
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rel. 16, Last annotation update)
RECURSOR (EC 3.4.14.1).
um (Blood fluke).
Platyhelminthes; Rhabditophora;
Strigeidida; Schistosomatoidea;
                   69.5%;
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MEDLING-20406833; PubMed=10952301;
Heidelberg J.F., Eisen J.A., Nelson W.C., Clayton R.A., Gwinn M.L.,
Dodson R.J., Haft D.H., Hickey E.K., Peterson J.D., Umayam L.A.,
Gill S.R., Nelson K.E., Read T.D., Tettelin H., Richardson D.,
Ermolaeva M.D., Vamathevan J., Bass S., Qin H., Dragoi I., Sellers P.,
MCDonald L., Utterback T., Fleishmann R.D., Nierman W.C., White O.,
Salzberg S.L., Smith H.O., Colwell R.R., Mekalanos J.J., Venter J.C.,
Fraser C.M.;
                                                                                                          Nature 406:477-483(2000).
EMBL; AE004294; AAF95373.1;
TIGR; VC2229; -.
SEQUENCE 281 AA; 31824 MP
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Bacteria; Proteobacteria;
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Hypothetical protein.

SEQUENCE __305 AA; 3367
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Xiong J., Fischer W.H., Inoue K.,
"Molecular evidence for the early
"Science 289:1724-1730(2000).
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Bacteria; Green non-sulfur bacteria;
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Niedermeier G., Shiozawa J.A., Lottspeich
"The primary structure of two chlorosome p
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AF288602; AAG15233.1;
Pro; IPR000537; -.
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EMBL; D90915; BAA18575.1; -
MEROPS; S12.001; -.
Carboxypeptidase.
SEQUENCE 400 AA; 44316 M
           007068;
01-JUL-1997
01-JUL-1997
01-MAR-2001
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01-NOV-1998
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MEDILINE-97061201; PubMed-8905231;

Kaneko T., Sato S., Kotani H., Tanaka A., Asamizu E., Nakan Miyajina N., Hirosawa M., Sugiura M., Sasamoto S., Kinura Miyajina N., Hirosawa M., Muraki A., Nakazaki N., Naruo K., Shimpo S., Takeuchi C., Wada T., Watanabe A., Yamada M., Ya
                                                                                                                                                                                                                                                         MEDLINE=98432776; pubMed=9758777;
Bertoni G., Martino M., Galli E., Barbi
"Analysis of the gene cluster encoding
from Pseudomonas stutzeri OX1.";
Appl. Environ. Microbiol. 64:3626-3632(
EMBL, AJ005663; CAA06654.1; -.
InterPro; IPR003430; -.
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 01-JUL-1997 (TrEMBLrel. 04, Create 01-JUL-1997 (TrEMBLrel. 04, Last s 01-JUL-1997 (TrEMBLrel. 16, Last s 01-MAR-2001 (TrEMBLrel. 16, Last s TOLUENE-3-MONOOXYGENASE OXYGENASE
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SEQUENCE 498 AA;
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01-MAR-2001 (TIEMBLIE1. 16, Last annotation update)
PUTATIVE SUBSTRATE BINDING PROTEIN (EXTRACELLULAR) (BINDING-PROTEIN-
DEPENDENT TRANSPORT) (FRAGMENT).
                                                                                      MEDLINE-97000351; PubMed-8843436;
Redenbach M., Kieser H.M., Denapaite D., Eichner &
Kinashi H., Hopwood D.A.;
"A set of ordered cosmids and a detailed genetic &
the 8 Mb Streptomyces coelicolor A3(2) chromosome.
Mol. Microbiol. 21:77-96(1996).
EMBL; ALII7322; CAB55535.1; -.
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Submitted (SE
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STRAIN=A3(2);
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01-MAY-2000
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SEQUENCE 501 AA;
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Burkholderia
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PF02332; Phenol_Hydrox;
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                                                        MEDLINE-99310339; PubMed-10382966;
Rawarabayasi Y, Hino Y, Horikawa H, Yamazaki S., Haik
Jin-no K., Takahashi M., Sekine M., Baba S.-I., Ankai A.
Hosoyama A., Fukui S., Nagai Y., Nishijima K., Nakazawa
Takamiya M., Masuda S., Funahashi T., Tanaka T., Kudoh Y
Yamazaki J., Kushida N., Oguchi A., Aoki K.-I., Kubota K
Nakamura Y., Nomura N., Sako Y., Kikuchi H.;
"Complete genome sequence of an aerobic hyper-thermophil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro; IPRO03557; -.
InterPro; IPRO03557; -.
Pfam; PF01578; CYFC_asm; 1.
PRINTS; PR01386; CCMCBIOGNSIS.
PRINTS; PR01386; CCMCBIOGNSIS.
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Science 286:1571-1577(1999).
EMBL; AE001895; AAF09930.1; -.
TIGR; DR0348; -.
 InterPro; IPRO Pfam; PF00528;
                      crenarchaeon, Aeropyrum pernix DNA Res. 6:83-101(1999). EMBL; AP000064; BAA81265.1; -
                                                                                                                                                                                                                                                                                                      Q9Y9N5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               White O., Eisen J.A., Heidelberg J.F., Hickey E.K., Peterson J.D., Dodson R.J., Haft D.H., Gwinn M.L., Nelson W.C., Richardson D.L., Moffat K.S., Qin H., Jiang L., Pamphile W., Crosby M., Shen M., Vamathevan J.J., Lam P., McDonald L., Utterback T., Zalewski C., Makarova K.S., Aravind L., Daly M.J., Minton K.W., Fleischmann R.D., Ketchum K.A., Nelson K.E., Salzberg S., Smith H.O., Venter J.C.,
                                                                                                                                                                                                                    Archaea; Crenarchaeota;
                                                                                                                                                                                                                                                                                                                 29Y9N5
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Racteria; Thermus/Deinococcus
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                                                                                                                                                                                             NCBI_TaxID=56636;
                                                                                                                                                                                                          \eropyrum.
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99 (TrEMBLrel.
01 (TrEMBLrel.
3 HYPOTHETICAL
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1 (TrEMBLrel. 16, 1
C-TYPE BIOGENESIS
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.A., Heidelberg J.F.,
.D.H., Gwinn M.L., Ne
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83.3%;
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12, Last sequence update)
16, Last annotation update)
LACTOSE TRANSPORT SYSTEM PERMEASE
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Last annotation updat
S PROTEIN, HEME EXPORT
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57;
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01-JUL-1997
01-JUL-1997
01-OCT-2000
                                                                             Crassostrea gigas (Pacific cyster)
Eukaryota; Metazoa; Mollusca; Biva.
Ostreoidea; Ostreidae; Crassostrea
NCBI_TaxID-29159;
       01-JUL-1997 (TrEMBLrel: 04, Created)
01-JUL-1997 (TrEMBLrel: 04, Last sequence update)
01-CT-2000 (TrEMBLrel: 15, Last annotation update)
ALPHA-AMYLASE PRECURSOR (EC 3.2.1.1) (1,4-ALPHA-D-GLUCAN
GLUCANOHYDROLASE) (GLYCOGENASE) (FRAGMENT).
                                                                                                                                                                                                                                                                                    Hydrolase;
SEQUENCE
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AMYLASE (EC
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                                        Moal J., Dar
Samain J.F.;
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Pfam; PF00128; alpha-amylase;
Hydrolase; Glycosidase.
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                                                     SEQUENCE FROM N.A.
TISSUE-DIGESTIVE GLAND;
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Submitted (
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                                                                                                                                                                                                                                                                                                                                                                                       Archaea; Euryarchaeota;
NCBI_TaxID=65421;
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                                                                                                                                                                                                                                                                                                              nes R.A., Patel B., Beacham I.R.;
mitted (AUG-1997) to the EMBL/GenBank/DDBJ databases.
CATALYTIC ACTIVITY: ENDOHYDROLYSIS OF 1,4-ALPHA-GLUCOSIDIC
LINKAGES IN OLIGOSACCHARIDES AND POLYASACCHARIDES.
L; AF017454; AAB87860.1; -.
P; P06278; IVJS.
P; P06278; IVJS.
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5; Conserv
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                                               Daniel J.Y.,
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(TremBLrel. 06, Last sequence update)
(TremBLrel. 15, Last annotation update)
3.2.1.1) (ALPHA-AMYLASE) (1,4-ALPHA-D-GLUCAN
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                                                                                     Mollusca; Bival
ae; Crassostrea.
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71.4%;
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55.6%;
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Pred.
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                                              s.
                                                                                             Bivalvia;
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                                               Sellos
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1.2e+02;
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                                               Wormhoudt
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RESULT
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Plant Cell Physiol. 38:375-378(1997).
EMBL; D88415; BAA21109.1; -.
Mendel; 24197; Goshi:1201;24197.
InterPro; IPR000882; -.
Pfam: PF01357; Pollen_allergen; 1.
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SEQUENCE
Fragaria ananassa (Strawberry).
Eukaryota; Viridiplantae; Embryophyta; Tracheophyta; Spermatophyta;
Magnoliophyta; eudicotyledons; core eudicots; Rosidae; eurosids I;
Rosales; Rosaceae; Fragaria.
NCBI_TaxID=3747;
                                                                            01-NOV-1999 (TrembLrel.
01-MAY-2000 (TrembLrel.
01-MAR-2001 (TrembLrel.
ExpanSin (FRAGMENT).
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SEQUENCE
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Gossypium hirsutum (Uplande)
Eukaryota; Viridiplantae;
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PRINTS; PR00110; ALDHAAMYLASE.
Signal; Hydrolase; Glycosidase
NON_TER 1 1
SIGNAL 1 8 P
                                                                                                                                Q9XGR7;
                                                                                                                                                Q9XGR7
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01-JAN-1998 (TrEMBLrel.
01-MAR-2001 (TrEMBLrel.
                                                                    EXPl
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57435 MW;
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71.48;
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Embryophyta;
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Last annotation
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Pred. No. 55;
1; Mismatches
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Last annotation
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2F3864914E7278AC CRC64;
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1.3e+02;
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                                                                                                                                                                                                                                                                                                                                                                         Nicotiana tabacum (Common tobacco).
Eukaryota; Viridiplantae; Embryophyta;
Magnoliophyta; eudicotyledons; core euc
Solanales; Solanaceae; Nicotiana.
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Rose J.K.C., Lee H.H., Benner
Submitted (JAN-2000) to the 1
EMBL; AF163812; AAD44345.2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rose J.K.C., Lee H.H., Bennett A.B.;
"Expression of a divergent expansin gene is fruit-specific and ripening-regulated.";
proc. Natl. Acad. Sci. U.S.A. 94:5955-5960(1997).
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STRAIN-CV. CHANDLER;
MEDLINE-97303239; PubMed-9159182;
                                                                                                                                              Pfam; PF01357; Pollen_allergen; 1. PRINTS; PR01225; EXPANSNFAMLY.
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Ol-MAY-1999 (TrEMBLrel. 10, Last sequence update)
Ol-MAR-2001 (TrEMBLrel. 16, Last annotation update)
ALPHA-EXPANSIN PRECURSOR (FRAGMENT)
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Pfam; PF001357; Pollen_allergen;
PRINTS; PR01225; EXPANSNFAMLY.
ProDom; PD002179; -; 1.
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Rose J.K.C., Lee H.H.,
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Link B.M., Cosgrove D.J.;
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to the EMBL/GenBank/DDBJ databases
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dicots; Asteridae; euasterids
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"Univaceoviridis E-86.";

EMBL; AJ292317; CAC19491.1;

W Xylan degradation; Hydrolase; Glvcc---

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                                                                                                                                                                                                                                                                                                                                                                                                       Q9EW89;
01-MAR-2001 (TrEMBLrel. 1
01-MAR-2001 (TrEMBLrel. 1
01-MAR-2001 (TrEMBLrel. 1
BETA-XYLANASE (EC 3.2.1.8
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STRAIN=CV. WEST VIRGINIA 106; TISSUE=FRUIT;
Lemaire-Chamley M., Petit J., Causse M., Raymond P., Cheval:
Lemaire-Chamley M., Petit J., Causse M., Raymond P., Cheval:
"Isolation and characterization of cDNAs expressed during ex
development of tomato fruit by mRNA differential display.";
Submitted (JAN-2000) to the EMBL/GenBank/DDBJ databases.
EMBL; AJ270960; CAB65694.L; -.
                                                                                                         STRAIN-E-86;
Sthang H., Yao B., Wang Y.;
"Cloning and expression of the 23kD
Streptomyces ollvaceoviridis E-86.";
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Lycopersicon esculentum (Tomato).

Eukaryota; Viridiplantae; Embryophyta; Tracheophyta; Spermatophyta;

Eukaryota; Viridiplantae; Embryophyta; Tracheophyta; Spermatophyta;

Eukaryota; Viridiplantae; Embryophyta; Tracheophyta; Spermatophyta;
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01-MAY-2000
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EXPANSIN 18
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Pfam; PF01357; Pollen_allergen;
PRINTS; PR01225; EXPANSNFAMLY.
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MEDLINE-20317189; PubMed-10859177;
IM K.H., Cosgrove D.J., Jones A.M.;
"Subcellular localization of expansin miplant physiol. 123:463-470(2000).
EMBL; AF230331; AAF35900.1; -.
InterPro; IPR000882; -.
Pfam; PF01357; Pollen_allergen; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Zinnia elegans.
Eukaryota; Viridiplantae; Embryophyta; Tracheophyta; Spe
Magnoliophyta; eudicotyledons; core eudicots; Asteridae;
euasterids II; Asterales; Asteraceae; Asteroideae; Heli?
                         EMBL;
                                                                                                                                                                                                       Streptomyces sp.
Bacteria; Firmicutes;
Actinomycetales; Strep
NCBI_TaxID-1931;
                                                                                                                                                                                                                                                                                                                            01-NOV-1996 (TrEMBLrel.
01-NOV-1996 (TrEMBLrel.
01-OCT-2000 (TrEMBLrel.
ENDO-1,4-BETA-XYLANASE (
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01-MAR-2001
                                                                                                                           STRAIN-S38;
Georis J.C.E.;
                                                                                                                                                                                                                                                                                                                                                                                                                                  Q59962
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                                                                                                          Submitted
                                                                                                                                                                   SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                           XYLANOHYDROLASE).
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mitted (JUN-1996) to the EMBL/GenBank/DDBJ databases. CATALYTIC ACTIVITY: ENDOHYDROLYSIS OF 1,4-BETA-D-XYLOSIDIC LINKGES IN XYLANS.
LINKGES IN XYLANS.
LL; X98518; CAA67143.1; -.
P; P09850; IXNB.
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3.2.1.8) (1,4-BETA-D-XYLAN
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P93493;
01-MAY-1997
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PRINTS; PR00911; GLHYDRLASE11.

PROSITE; PS00776; GLYCOSYL_HYDROL_F11_1; 1.

PROSITE; PS00777; GLYCOSYL_HYDROL_F11_2; 1.

Xylan degradation; Hydrolase; Glycosidase.

Xylan degradation; Hydrolase; Glycosidase.

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ENDO-1,4-BETA-XYLANASE.

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SEQUENCE
Hutchison K.W., Singer P.B., Submitted (JUL-1996) to the I EMBL; U64891; AAB40635.1; -. Mendel; 12161; Pinta;1201;121
                                                                                                                                                   Pinus taeda (Loblolly pine).
Eukaryota; Viridiplantae; En
Coniferopsida; Coniferales;
                                                                                                                                                                                                         01-MAY-1997 (TremBLrel.
01-MAY-1997 (TremBLrel.
01-MAR-2001 (TremBLrel.
01-MAR-2001 (TremBLrel.
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Pfam; PF01357; POllen_allergen;
PRINTS; PR01225; EXPANSNFAMLY.
PRINTS; PR00829; LOLP1ALLERGN.
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Hutchison K.W., Singer P.B., Dia
Submitted (JUL-1996) to the EMBI
EMBL; U64890; AAB40634.1; -.
Mendel; 12160; Pinta;1201;12160.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pinus taeda (Loblolly pine).
Eukaryota; Viridiplantae; Embryophyta; Trach
Coniferopsida; Coniferales; Pinaceae; Pinus.
NCBI_TaxID-3352;
                                                                            TISSUE=HYPOCOTYL;
                                                                                                                                   NCBI_TaxID=3352;
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                                                                                              SEQUENCE FROM
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                                                                                                                                                     Embryophyta;
s; Pinaceae; F
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Last sequence up
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EMBL/GenBank/DDBJ
                                      EMBL/GenBank/DDBJ
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Pred. No.
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81;
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DBJ databases.
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01-MAY-1997 (TIEMBLITEL C
01-MAR-2001 (TIEMBLITEL 1
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01-MAY-1997
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               Hutchison K.W., Singer P.B., Diaz-Sala C., Gre Submitted (JUL-1996) to the EMBL/GenBank/DDBJ EMBL, U64893; AAB40637.1; -.
Mendel; 12163; Pinta;1201;12163.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hutchison K.W., Singer P.B., Diaz-Sala C., Gre Submitted (JUL-1996) to the EMBL/GenBank/DDBJ EMBL; U64892; AB40636 1; ... Mendel; 12162; Pinta;1201;12162. Interpro; IPR000882; ... Pfam; PF011357; Pollen_allergen; 1. PRINTS; PR01225; EXPANSNFAMLY. PRINTS; PR01225; EXPANSNFAMLY. PRINTS; PR00829; LOLPJALLERGN.
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                                                                                                                                                                                       EXPANSIN (FRAGMENT).
Pinus taeda (Lobiolly pine).
Eukaryota; Viridiplantae; Embryophyta; Tracheophyta;
Coniferopsida; Coniferales; Pinaceae; Pinus.
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Eukaryota; Viridiplantae; En
Coniferopsida; Coniferales;
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PRINTS; PR00829; LOLP1ALLERGN.
NON_TER 1 1
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Pfam; PF01357; Pollen_allergen;
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s; Pinaceae; Pinus.
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01-MAY-1999 (TrEMBLrel. 1)
01-MAR-2001 (TrEMBLrel. 16
EXPANSIN PRECURSOP
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Q38863;
Q1-NOV-1996 (TrEMBLrel. 01, Created)
Q1-NOV-1996 (TrEMBLrel. 01, Last sequence update)
Q1-MAR-2001 (TrEMBLrel. 16, Last annotation update)
EXPANSIN ATEX1 (FRAGMENT).
Arabidopsis thaliana (Mouse-ear cress).
Eukaryota; Viridiplantae; Embryophyta; Tracheophyta; Sp
Magnoliophyta; eudicotyledons; core eudicots; Rosidae;
Brassicales; Brassicaceae; Arabidopsis.
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SEQUENCE
  STRAIN-CV. 91347;
             SEQUENCE FROM N.A.
                                               Lycopersicon esculentum (Tomato).
Eukaryota; Viridiplantae; Embryophyta;
Magnoliophyta; eudicotyledons; core eu
Solanales; Solanaceae; Solanum.
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01-MAY-1999
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PRINTS; PRO0829; LOLPIALLERGN
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SEQUENCE 232 AA; 24694 MW;
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                                   NCBI_TaxID-4081;
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Pfam; PF01357;
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eudicots; Asteridae;
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EXPANSIN 3.
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SEQUENCE
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EMBL; AF059489; AAD13633.1; Mendel; 36058; Lyces;1201;36058.
                                                                                                                                                                                                                                       Im K.H., Cosgrove D.J., Jones A.M.;
"Subcellular localization of expansin
Plant Physiol. 123:463-470(2000).
EMBL; AF23033; AAF35902.1; -.
Interpro; IPR000882; -.
Pfam; PF01157; Pollen_allergen; 1.
          EXPANSIN 2.
Zinnia elegans
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ProDom; PD002179; -; 1.
SEQUENCE 242 AA; 26157 MW;
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Eukaryota; Viridiplantae;
Eukaryota; Viridiplantae; Embryophyta; Tracheophyta; Spermatophyta;
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euasterids II;
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239 AA;
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eudicotyledons; core eudicots; Asteridae;
Asterales; Asteraceae; Asteroideae; Heliantheae;
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Submitted (DEC-200) to the EMBL/GenBank/DDBJ datab
EMBL; AJ291816; CAC19183.1; -
SEQUENCE 245 AA; 26469 Mag.
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Eukaryota; Viridiplantae; Embryophyta; Tracheo
Magnoliophyta; eudicotyledons; core eudicots;
Fabales; Fabaceae; Papilionoideae; Cicer.
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EMBL; AF230332; AAF35901.1; -.
InterPro; IPR000882; -.
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PM17_WOUSE
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PM17_TEAST
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CCSA_CHLVU
CCSA_CHLVU
CCSA_CHLVU
CCSA_CRATH
APBE_BUCAF
YCDS_ECOLI
FCP_ISOA
YB52_MYCPA
POL_SIVA3
PM1B_ARATH
YEJH_ECOLI
YE68_METJA
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p76463 escherichia p16701 escherichia p16315 chlorella v p56315 chlorella v p56770 arabidopsis 08529 buchnera ap 088894 cobacco rin p75907 escherichia Q39709 isochrysis p75034 mycoplasma p12501 simian immu p46032 arabidopsis p33919 escherichia Q58863 methanococc p27980 simian immu p27973 simian immu p27973 simian immu p26501 escherichia p5601 escherichia p56739 bacillus su 046108 drosophila p56737 mycoplasma p24107 human immun p74120 human immun p05962 human immun p05962 human immun p12451 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun p18042 human immun 
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P25044 saccharomyc
P76463 escherichia
P16701 escherichia v
P56315 chlorella v
P56770 arabidopsis
Q85292 buchnera ap
Q88894 tobacco rin
P75907 escherichia
Q39709 isochrysis
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PAAG_ECOLI	VG37_BPOX2	VG37_BPM1	XYNC_STRLI	PA24_BUNMU	PA22_BUNMU	PA23_BUNMU	PA21_BUNMU	FA5_HUMAN	FA5_BOVIN	POL_HV2BE	POL_HV2D1
P77467 escherichia	P08232 bacteriopha		P26220 streptomyce							P18096 human immun	

## ALIGNMENTS

RA RA RA RA RA RA RA RA	RP RA RA RA RA RA RA RA RA RA RA RA RA RA	R R R R R R R R R R R R R R R R R R R	17
SEQUENCE FROM N.A.  SEQUENCE FROM N.A.  Kwon B.S., Kim K., Heng H.H., Shi X.M., Tsui L., Lee Z.H.,  Youn B., Pickard R.T.;  Submitted (JAN-1996) to the EMBL/GenBank/DDBJ databases.  [6]  SEQUENCE FROM N.A.  Vogel A.;  Vogel A.;	SEQUENCE FROM N.A.  MEDLINE=96154052; PubMed=8592076; Bailin T., Lee S.T., Spritz R.A.; "Genomic organization and sequence of D12553E (Pmel 17), the human homologue of the mouse silver (si) locus."; J. Invest. Dermatol. 106:24-27(1996).  [4] SEQUENCE FROM N.A., AND SEQUENCE OF 25-53.  MEDLINE=94235165; PubMed=8179825; Maresh G.A., Marken J.S., Neubauer M., Aruffo A., Hellstroem I., Hellstroem K.E., Marquardt H.; "Cloning and expression of the gene for the melanoma-associated ME20 antigen."; DNA Cell Biol. 13:87-95(1994).	SEQUENCE FROM N.A.  SEQUENCE FROM N.A.  MEDLINE=92021023; PubMed=1924386;  Kwon B.S., Chintamaneni C., Kozak C.A., Copeland N.G.,  Gilbert D.J., Jenkins N.A., Barton D., Francke U., Kobayashi Y.,  "A melanocyte-specific gene, Pmel 17, maps near the silver coat color locus on mouse chromosome 10 and is in a syntenic region on human  proc. Natl. Acad. Sci. U.S.A. 88:9228-9232(1991).  SEQUENCE FROM N.A.  MEDLINE=94327568; PubMed=7519602;  Medlarc characterization of the melanocyte lineage-specific  J. Biol. Chem. 269:20126-20133(1994).	_HUMAN _HUMAN STANDARD; PRT; 661 AA. PMAI7_HUMAN STANDARD; PRT; 661 AA. PMAI7_HUMAN STANDARD; PRT; 661 AA. PA0967; Q16565; Q14817; Q12763; Q14448; 01-FEB-1995 (Rel. 31, Created) 01-FOV-1997 (Rel. 35, Last sequence update) 01-OCT-2000 (Rel. 40, Last annottation update) 01-OCT-2000 (Rel. 40, Last annottation update) MELANOCYTE PROTEIN PMEL 17 PRECURSOR (MELANOCYTE LINEAGE-SPECIFIC ANTIGEN GP100) (MELANOMA-ASSOCIATED ME20 ANTIGEN) (ME20M/ME205) (ME20-M/ME20-5) (95 KDA MELANOCYTE-SPECIFIC SECRETED GLYCOPROTEIN). SILV OR PMEL17 OR D12553E. HOMO Saptens (Human). Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. NCBI_TaxID=9606;

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Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                     use by non-profit institutions as long modified and this statement is not removed
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the European Bioinformatics Institute.
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U01874;
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S73003;
U31799;
U31808;
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                                          RIFCSCPIGENSPLLSGQQV -> ASSALVPLVRIAPSSVG SRSEYSHMML (IN REF. 6).
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CYTOPLASMIC (POTENTIAL).
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Score
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01-NOV-1997 (Rel. 35, Last seq
01-OCT-2000 (Rel. 40, Last announcement of the protein pmgL 17 PREC SILV OR PMGLATOR D10H12S53E OF MUS miscoling control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control of the pmg control o
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Q60696;
Q1-NOV-1997
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DOMAIN
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SIGNAL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Mouse silver mutation is caused by putative cytoplasmic domain of Pmel Nucleic Acids Res. 23:154-158(1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
STRAIN-C57BL/6; TISSUE-Skin;
MEDLINE-95175358; PubMed-7870580;
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                                                                                                                                                        REPEAT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FUNCTION: COULD BE A MELANOGENÍC ENZYME.

SUBCELLULAR LOCATION: TYPE I MEMBRAME PROTEIN (POTENTIAL).

TISSUE SPECIFICITY: PREFERENTIALLY EXPRESSED IN MELANOCYTES.

DISEASE: DEFECTS IN PMELI7 ARE THE CAUSE OF THE SILVER COAT WHICH SEEMS TO BE DUE TO PREMATURE DEATH OF PIGMENT CELLS DU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SIMILARITY: CONTAINS
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Last annotation
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CYTOPLASMIC (POTENTIAL).
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7 x 13 aa approximate tandem repeats
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Q98917;
15-JUL-1998
                          Signal;
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01-OCT-2000
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                                                                                                                                                                               s SWISS-PROT entry is copyright. It is produced through a collaboration ween the Swiss Institute of Bioinformatics and the EMBL outstation - European Bioinformatics Institute. There are no restrictions on its by non-profit institutions as long as its content is in no way liftled and this statement is not removed. Usage by and for commercial itses requires a license agreement (See http://www.isb-sib.ch/announce/send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FUNCTION: MIGHT BE REQUIRED FOR POLYMERIZATION OF MELANIN ONTO THE CORE STRUCTURE OF MELANOSOMES WITH ENZYMIC FUNCTION OF TYROSINASE. SUBCELLULAR LOCATION: ON THE FIBROUS MATRIX STRUCTURE OF THE
                                                                                                                                                                                                                                                                                                                                                                   SIMILARITY: BELONGS TO THE PMEL-17/NMB FAMILY. SIMILARITY: CONTAINS 1 PKD DOMAIN.
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8; Conserv
                                           Glycoprotein;
                                           PS50093; PKD; 1.
Glycoprotein; Repeat.
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                                                                                                                348; BAA13589.1; IPR000601; -.
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36, Last sequence
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EMBL; Z74278; CAA98809.1; -
PIR; A39862; A39862.
HSSP; P18052; 1YFO.
SGD; S0002389; PTP1.
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-i- FUNCTION: IS NOT REQUIRED FOR VEGETATIVE GROWTH.
-i- CATALYTIC ACTIVITY: PROTEIN TYROSINE PHOSPHATE + H(2
- PROTEIN TYROSINE + ORTHOPHOSPHATE.
-i- SUBCELLULAR LOCATION: CYTOPLASMIC.
-i- SIMILARITY: BELONGS TO THE NON-RECEPTOR CLASS OF THE
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                                                                                                                                                                                                                                                                                                                                             entities requires a license agreement (S or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                  the European Bioinformatics Institute. Thuse by non-profit institutions as long modified and this statement is not removed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EN
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Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Saccharomyces cerevisiae (Baker's yeast).
Eukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomycetes;
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Ol-MAY-1992 (Rel. 22, Last sequence update)
Ol-MOV-1997 (Rel. 35, Last annotation update)
PROTEIN-TYROSINE PHOSPHATASE 1 (EC 3.1.3.48)
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Science
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"Construction of a contiguous 874-kb
"Construction of a contiguous 670.0-68
-K12 genome corresponding to 50.0-68
analysis of its sequence features.";
DNA Res. 4:91-113(1997).
                                                                                                                                                                                                                                                                                    MEDLINE=97349980; PubMed=9205837; Yamamoto Y., Alba H., Baba T., Hayashi K., Inada T., Ison Yamamoto Y., Alba H., Baba T., Makino K., Miki T.; Mits Itoh T., Kimura S., Kitagawa M., Makino K., Miki T.; Mits Mizobuchi K., Mori H., Nakade S., Nakamura Y., Nashimoto Oshima T., Oyama S., Saito N., Sampei G., Satoh Y., Sivas Tagami H., Takahashi H., Takeda J., Takemoto K., Uehara K
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"Sulfate and thiosulfate transport
nucleotide sequence and expression
J. Bacteriol. 172:3351-3357(1990).
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EMBL; M32101; AAA23637.1; -.
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EMBL; D90871; BAA16298.1; -.
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                                                    CCSA_ARATH
P56770;
30-MAY-2000
30-MAY-2000
01-OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE-97303241; PubMed-9159184; Medita M., Ito M., Wakasuqi T., Nagai T., Kapoor M., Sugita M., Ito M., Tsudzuki J., Nakashima K., Tsudzuki T., Suzuki Y., H Inamura A., Yoshinaga K., Sugiura M.; "Complete nucleotide sequence of the chloroplast gen green alga Chlorella vulgaris: the existence of gene involved in chloroplast division."; Proc. Natl. Acad. Sci. U.S.A. 94:5967-5972(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15-JUL-1998
15-JUL-1998
15-JUL-1998
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NCBI_TaxID=3077;
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                  CYTOCHROME CCSA.
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STRAIN=IAM C-27 /
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Arabidopsis thaliana
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-!- SIMILARITY: BELONGS TO THE CCMF/CYCK/CCL1/NRFE/CCSA FAMILY.
                                                                                                                                                                                                                                    243
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5; Conservative
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315 AA; 35471 MW;
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5020388E94FE4F10 CRC64;
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30-MAY-2000 (
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                                           Thao M.L., Baumann P.;

Submitted (MAR-1999) to the EMBL/GenBank/DDBJ databases.

Submitted (MAR-1999) to the CONVERSION OF AMINOIMIDAZOLE RIBOTIDE PUNCTION: INVOLVED IN THE CONVERSION OF AMINO-5-HYDROXYMETHYL-2-

(AIR), A PURINE INTERMEDIATE, TO THE 4-AMINO-5-HYDROXYMETHYL-2-

METHYL PYRIMIDINE (HMP) MOIETY OF THLAMINE (BY SIMILARITY).

-!- PATHMAY: BIOSYNTHESIS OF THE PYRIMIDINE MOIETY OF THIAMINE.

-!- SIMILARITY: BELONGS TO THE APBE FAMILY.
                                                                                                                                                                                                   murE.
                                                                                                                                                                                                     That M.L., Baumann P.;
That M.L., Baumann P.;
"Sequence analysis of a DNA fragment from Buchnera aphidicola (Aphidendosymbiont) containing the genes dapD-htrA-ilvI-ilvH-ftsL-ftsI-endosymbiont) containing the genes dapD-htrA-ilvI-ilvH-ftsL-ftsI-
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Eukaryota; Viridiplantae; Embryophyta; Tracheophyta; Spermatophyta;

Magnoliophyta; eudicotyledons; core eudicots; Rosidae; eurosids II;

Brassicales; Brassicaceae; Arabidopsis.

NCBI_TaxID=3702;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        InterPro; IPR002541; -...
Pfam; PF01578; CytC_asm; 1.
Cytochrome c-type biogenesis;
SEQUENCE 328 AA; 37732 MW;
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MEDLINE=20039611; Pu
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SIMILARITY: BELONGS TO THE CCMF/CYCK/CCL1/NRFE/CCSA FAMILY
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                                                                                                                                                                                                                                                                                                                                                                                                                                                       STANDARD;
entry is copyright. It is produced through a collaboration iss Institute of Bioinformatics and the EMBL outstation -
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BIOSYNTHESIS PROTEIN APBE PRECURSOR
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71.4%;
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C88D1508B2924D6F CRC64;
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Matches 7
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"Nucleotide sequence and in vitro expression gene of tobacco ringspot virus.";
Virus Res. 30:335-349(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COAT_TRSV
Q88894;
   SEQUENCE
                                                                                                                                                  This
                                                                                                                                                                                                                           X-RAY CRYSTALLOGRAPHY (3.5 ANGSTROMS).
MEDLINE-98179933; PubMed-9519407;
Chandrasekar V., Johnson J.E.;
                                                                                                                                                                                                                                                                                                                                                                                                                                         15-DEC-1998 (Rel. 37, Created)
15-DEC-1998 (Rel. 37, Last sequence update)
15-DEC-1998 (Rel. 37, Last annotation update)
COAT PROTEIN PRECURSOR (CAPSID PROTEIN).
Tobacco ringspot virus (Tobrsv) (Trsv).
                       roat protein;
                                              PDB;
                                                        EMBL; L09205; AAA74963.1;
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Viruses; ssRNA positive-strand viruses, no DNA
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                                                                                                                                                                                "The structure of tobacco ringspot virus: a link in icosahedral capsids in the picornavirus superfamily. Structure 6:157-171(1998).
-i- SUBUNIT: THE VIRUS COAT IS FORMED OF 60 COPIES O
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                                                                                                                                                                                                                                                                                                                                                                                                                                               Mau B., Shao Y.; "The complete genome sequence Science 277:1453-1474(1997).
                                                                                 Hypothetical protein; Outer membrane; SIGNAL 1 26 POTENTIA
                                                                                                                                                                                                                                                                          "A 718-kb DNA sequence of the Escherichia coli K-12 g corresponding to the 12.7-28.0 min region on the link DNA Res. 3:137-155(1996).
-i- SUBCELLULAR LOCATION: OUTER MEMBRANE (POTENTIAL).
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MEDLINE-94325461; PubMed-8049362;

LATOCHE J., Henry D., Wyman K., Sukenik A., Falkowski P.;

LATOCHE J., Henry D., Wyman K., Sukenik A., Falkowski P.;

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Light-harvesting polypeptide; Chloroplast; Photosynthesis;
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FUCOXANTHIN-CHLOROPHYLL A-C BINDING PROTEIN, CHLOROPLAST PRECURSOR
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22471
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CHLOROPLAST (PROBABLE).
FUCOXANTHIN-CHLOROPHYLL
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Pred.
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21A36700137A0F1B
                                                                                                 Mismatches
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YB52_MYCPN
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Matches
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01-OCT-1989
15-DEC-1998
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01-OCT-2000
01-OCT-2000
SEQUENCE FROM N.A.
SEQUENCE FROM N.A.
MEDLINE-89012184; PubMed-3172340;
Daniel M.D., Li Y., Naidu Y.M., Durda
Troup C.D., Silva D.P., Mackey J.J., K
                                                                                                               01-OCT-1989 (Rel. 12, Created)
01-OCT-1989 (Rel. 12, Last sequence update)
15-DEC-1988 (Rel. 37, Last annotation update)
POL POLYPROTEIN [CONTAINS: PROTEASE (RETROPEPSIN)
REVERSE TRANSCRIPTASE (EC 2.7.7.49); RIBONUCLEASE
                                                                                                                                                                               POL_SIVA3 P12501;
                                                                                                                                                                                                                                                                                                                                                           LIPID
SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       YB52_MYCPN P75034;
                                                   Simian immunodeficiency virus (AGM385 isolate) Viruses; Retroid viruses; Retroviridae; Lentivi NCBI_TaxID-11729;
[1]
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                                                                                                                                                                                                                                                                                                                                                                                              Hypothetical protein; SIGNAL 1 2
                                                                                                                                                                                                                                                                                                                                                                                                                                        entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A. STRAIN-ATCC 29342 MEDLINE-97105885;
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NCBI_TaxID=2104;
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Nucleic Acids
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                                                                                                          (FRAGMENT).
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                                                                                                                                                                                                                                                    268 KTWGKYQEV
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ANCHOR (POTENTIAL)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SWISS-PROT entry is copyright. It is produced through a centre the Swiss Institute of Bioinformatics and the EMBL
                                                                                                                                                                                                                                                                                                 Similarity 6; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           R.;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LOCATION: ATTACHED
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PubMed=8948633;
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23 N
86871 MW;
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CATION: ATTACHED TO
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66.7%;
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Last sequence up
Last annotation
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                                                                                                                                                                                                                                                                                                Score 39; DB Pred. No. 48; 2; Mismatches
                                                                                                                                                                                                                                                                                                                                                         POTENTIAL.
HYPOTHETICAL LIPOPROTEIN MPN152.
N-ACYL DIGLYCERIDE (POTENTIAL).
ODA72D12807F53EE CRC64;
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   a P.J., Schmidt
Kestler H.W., S
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Lentivirus.
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    Sehgal P.K.,
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3.1.26.4)
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-!- MISCEI
-!- SIMILA
                                                                                                                                                                                                                   Song W., Steiner H.-Y.,
Becker J.M.;
                                                                                                                                                                                                                                                                                                                                    PT2B_ARATH STANDARD; PRT; 585 AA.
p46032;
01-NOV-1995 (Rel. 32, Created)
01-NOV-1995 (Rel. 32, Last sequence update)
01-OCT-2000 (Rel. 40, Last annotation update)
PEPTIDE TRANSPORTER PTR2-B (HISTIDINE TRANSPORTING
PTR2-B OR NTR1 OR ATZG02040 OR F14H20.11.
Arabidopsis thaliana (Mouse-ear Cress)
  Lin X., Kaul S., Rounsley S.D., Shea T.P., Benito M.-I., Town C. Fujii C.Y., Mason T.M., Bowman C.L., Barnstead M.E., Feldblyum T. Buell C.R., Ketchum K.A., Lee J.J., Ronning C.M., Koo H., Moffat Cronin L.A., Shen M., Vanaken S.E., Umayam L., Tallon L.J., Gill
                                                                                                                                                                                                                                                                                                    Eukaryota; Viridiplantae; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NON_TER
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                                                                      STRAIN-CV.
                                                                                                                      Frommer W.B., Hummel S., Rentsch D.; "Cloning of an Arabidopsis histidine transporting nitrate and peptide transporters.";
                                                                                                                                                                                                               Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                             ARATH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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"Simian immunodeficiency vir
J. Virol. 62:4123-4128(1988)
                                                     MEDLINE=20083487; PubMed=10617197;
                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                            MEDLINE-94307379; PubMed-8033999
                                                                                                                                                                           STRAIN-CV.
                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                        NCBI_TaxID=3702;
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M21311; POL$AGM38.
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Polyprotein; Hydrolase; Aspartyl protease; Endonuclease;
ase; Transferase; RNA-directed DNA polymerase.
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5; Conservative
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                                                                      COLUMBIA;
                                                                                                          1 peptide transporters.";
347:185-189(1994).
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71.48;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 38; DB. Pred. No. 10; 0; Mismatches
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from African green monkeys.";
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   H., Moffat
L.J., Gill
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                                Church G.1
Submitted
STRAIN=K12 / MG1655;
                                                                                                                                        YEJH_ECOLI STANDARD; PRT; 586 AA. P33919; P36926; P36927; P76449; P369194 (Rel. 28, Created) O1-NOV-1997 (Rel. 35, Last sequence update) O1-NOV-1997 (Rel. 35, Last annotation update) HYPOTHETICAL 66.4 KDA PROTEIN IN RSUA-RPLY INTERGENIC
                                                                                                                                                                                                                                                                                                                               CONFLICT
SEQUENCE
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TRANSMEM
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             between the Swiss Institute of Bioinformat the European Bioinformatics Institute. The use by non-profit institutions as jumpodified and this statement is not removed. entities requires a license agreement (See lor send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Salzberg S.L., Fraser C.M., Venter J. "Sequence and analysis of chromosome thaliana.";
                                                 SEQUENCE FROM N.A.
STRAIN=K12 / BHB2600;
Richterich P., Lakey
                                                                                                                                                                                                                                                                                                                                                                                         TRANSMEM TRANSMEM
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1- FUNCTION: PEPTIDE TRANSPORT. HIGH AFFINITY,
-TRANSPORTER. CAN ALSO TRANSPORT HISTIDINE.
-!- SUBCELLULAR LOCATION: INTEGRAL MEMBRANE PRO:
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             SEQUENCE FROM
                                                                                          NCBI_TaxID=562;
                                                                                                      Escherichia
                                                                                                              Bacteria;
                                                                                                                        Escherichia
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2M 91
2M 116
2M 154
2M 200
2M 228
2M 228
2M 351
2M 387
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                                                                                                              subdivision;
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                                                                      STRAIN-DSM 2661;

MEDLINE-96337999; PubMed-8688087;

Bult C.J., White O., Olsen G.J., Zhou L., Fleischmann R.D.,

Bult C.J., White O., Olsen G.J., Zhou L., Fleischmann R.D.,

Sutton G.G., Blake J.A., Fitzgerald L.M., Clayton R.A., Gocayne J.D.,

Kerlavage A.R., Dougherty B.A., Tomb J.-F., Adams M.D., Reich C.I.,

Overbeek R., Kirkness E.F., Weinstock K.G., Merrick J.M., Glodek A.,

Scott J.L., Geoghagen N.S.M., Weidman J.F., Fuhrmann J.L., Nguyen D.,

Utterback T.R., Kelley J.M., Peterson J.D., Sadow P.W., Hanna M.C.,

Cotton M.D., Roberts K.M., Hurst M.A., Kaine B.P., Borodovsky M.,

Klenk H.-P., Fraser C.M., Smith H.O., Woese C.R., Venter J.C.,

Klenk H.-P., Fraser C.M., Smith H.O., Woese C.R., Venter J.C.,

Klenk H.-P., Fraser C.M., Smith H.O., Woese C.R., Venter J.C.,
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InterPro; IPR001650;
InterPro; IPR001650;
Pfam; PF00270; DEAD; 1.
Pfam; PF00271; helicase_C;
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                                                                  Jannaschii.";
Science 273:
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CAUTION: REF.1 SEQUENCE DIFFERS
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SIMILARITY: SOME SIMILARITY TO A PHAGE PROTEIN AND RE
                                    SUBCELLULAR LOCATION: INTEGRAL MEMI SIMILARITY: CONTAINS 5 PKD DOMAINS.
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SEQUENCE FROM N.A.
MEDLINE=90232731; PubMed=2158689;
Baier M., Garber C., Mueller C., Cicl
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Complete nucleotide sequence of a s
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01-AUG-1992 (Rel. 23, Last sequence update)
15-DEC-1998 (Rel. 37, Last annotation update)
POL POLYPROTEIN [CONTAINS: PROTEASE (RETROP
REVERSE TRANSCRIPTASE (EC 2.7.7.49); RIBONU
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                                                                                                                                                                                                          African green monkeys: a novel type of intragr
Virology 176:216-221(1990).
-I- PTM: CLEAVAGE SITES THAT YIELD THE MATURE
                                                                                                                                                                                                                                                                                             Simian immunodeficiency virus (AGM3 iso Viruses; Retroid viruses; Retroviridae; NCBI_TaxID=11730;
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ACT_SITE
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P27973;
P01-AUG-1992 (Rel. 23, Created)
P1-AUG-1992 (Rel. 23, Last sequence update)
P15-DEC-1998 (Rel. 37, Last annotation update)
POL POLYPROTEIN [CONTAINS: PROTEAGE (RETROPEPSIN)
REVERSE TRANSCRIPTASE (EC 2.7.7-49); RIBONUCLEASE
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Johnson P.R., Fomsgaard A., Allan J.,
Olmstead R.A., Hirsch V.M.;
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PROSITE; PS50175; ASP_PROT_RETROV; 1.
AIDS; Polyprotein; Hydrolase; Aspartyl protease; Endonuclease;
                                                                                                                                                                                                                       entities requires a license agreement (S or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                          the European Bioinformatics Institute. The use by non-profit institutions as long modified and this statement is not removed.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "Simian immunodeficiency viruses unusual genetic diversity.";
J. Virol. 64:1086-1092(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Simian immunodeficiency virus (AGM155 isolate) (SIV-AGM). Viruses; Retrold viruses; Retroviridae; Lentivirus. NCBI_TaxID=11727;
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5; Conservative
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Pfam; PF00078; rvt; 1.

PROSITE; PS00141; ASP_PROTEASE; 1.

PROSITE; PS50175; ASP_PROT_RETROV; 1.

AIDS; Polyprotein; Hydrolase; Aspartyl pro
Nuclease; Transferase; RNA-directed DNA po
ACT_SITE 113 113

SEQUENCE 1047 AA; 118871 MW; A38DDDA339
pfam; PF02022; Integrase
pfam; PF00552; Integrase
pfam; PF00075; rnaseH; 1
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Pfam; PF00078; rvt; 1.
PROSITE; PS00141; ASP_PF
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InterPro; IPR002156; -.
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EMBL; M58410;
HSSP; P03366;
                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.

MEDLINE-91220680; PubMed=2024476;

Fomsgaard A., Hirsch V.M., Allan J.S.,

"A highly divergent proviral DNA clone
of African green monkey.";

Virology 182:397-402(1991).

-i- PTM: CLEAVAGE SITES THAT YIELD THE
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01-CCT-2000 (Rel. 40, Last annotation update)
POL POLYPROTEIN (CONTAINS: PROTEASE (RETROPEPSIN)
REVERSE TRANSCRIPTASE (EC 2.7.7.49); RIBONUCLEASE
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"Sequence of simian immunodeficiency
a new member of the HIV/SIV group.";
Nature 333:457-461(1988).

-1- PTM: CLEAVAGE SITES THAT YIELD TH
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Escherichia coli.";
FEBS Lett. 307:347-350(1992).
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MEDLINE=92354744; PubMed=1644192;

Sibbert M., Bechthold A., Melzer M.,

Schroeder J., Severin K., Heide L.;

"Ubiquinone biosynthesis. Cloning of
                                                                 "Analysis of the Escherichia coli genome. "Analysis of the Escherichia coli genome. region from 89.2 to 92.8 minutes.";
Nucleic Acids Res. 21:5408-5417(1993).
                                                                                                                                                                                                                   Nishimura K., Nakahigashi K., Inokuchi H., "Location of the ubiA gene on the physical J. Bacteriol. 174:5762-5762(1992).
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4-HYDROXYBENZOATE
       MEDLINE=94014977; PubMed=8409922; Wu G., Williams H.D., Glbson F., Poole "Mutants of Escherichia coli affected nucleotide sequence of ubiA, encoding
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-I- FUNCTION: SYNTHESIS OF 3-OCTAPRENYL-4-HYDROXYBENZOATE.
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-!- PATHWAY: SECOND STEP IN UBIQUINONE BIOSYNTHESIS.
-!- SUBCELLULAR LOCATION: INTEGRAL MEMBRANE PROTEIN. INNER MEMBRANE.
-!- SIMILARITY: BELONGS TO THE UBIA PRENYLTRANSFERASE FAMILY.
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S24361; S24361.

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L; X57434; CAA40682.1; ...
L; X69522; CAA49270.1; ...
L; M00006; AAC43134.1; ...
L; AB00047; AAC477010.1; ...
L; M96268; AAA17028.1; ...
L; M96268; AAA17028.1; ...
L; M96268; AAA17028.1; ...
L; X63407; CAA45003.1; ...
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RESULT 23 SLEB\_BACSU

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P50739;
01-0CT-1996 (Rel. 34, Created)
01-0CT-1996 (Rel. 34, Last sequence update)
15-JUL-1999 (Rel. 38, Last annotation update)
LIP3_DROME STANDARD; PRT; 394 AA.
046108;
046108;
01-OCT-2000 (Rel. 40, Created)
01-OCT-2000 (Rel. 40, Last sequence update)
01-OCT-2000 (Rel. 40, Last annotation update)
LIPASE 3 PRECURSOR (EC 3.1.1.-).
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MEDLINE=96349105; PubMed=8760912;
MEDINE=96349105; PubMed=8760912;
MEDINE=96349105; PubMed=8760912;
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"A gene (sleB) encoding a spore
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RA Amanatides P.G., Scherer S.E., Li P.W., Hoskins R.A., Galle R.F.,
RA George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N.,
RA Button G.G., Wortman J.R., Yandell M.D., Zhang Q., Chen L.X.,
RA Burandon R.C., Rogers Y.-H.C., Blazej R.G., Champe M., Pfeiffer B.D.,
RA Burandon R.C., Rogers Y.-H.C., Blazej R.G., Champe M., Pfeiffer B.D.,
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RA Burandon R.C., Baxter E.G., Andrews Pfannkoch C.R., Miklos G.L.G.,
RA Burli J.F., Agbayani A., An H.-J., Andrews Pfannkoch C., Baldwin D.,
RA Ballew R.M., Basu A., Baxendale J., Bayraktaroglu L., Beasley E.M.,
RA Beeson K.Y., Benos P.V., Berman B.P., Bhandari D., Bolshakov S.,
RA Burtis K.C., Busam D.A., Butler H., Cadieu E., Center A., Chandra I.,
RA Berkova D., Botchan M.R., Bouck J., Brokstein P., Brottier P.,
RA Cherry J.M., Cawley S., Dahlke C., Davenportt L.B., Davies P.,
RA Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Dunkov B.C., Dunn P.,
RA Durbin K.J., Evangelista C.C., Ferraz C., Ferriera S., Fleischmann W.,
RA Glodek A., Gong F., Gorrell J.H., Gu Z., Guan P., Harris M.,
RA Glodek A., Gong F., Gorrell J.H., Gu Z., Guan P., Harris M.,
RA Hostlin D., Houston K.A., Howland T.J., Hernandez J.R., Houck J.,
RA Kimmel B.E., Kodira C.D., Kraft C., Kravitz S., Kulp D., Lai Z.,
RA Kimmel B.E., Kodira C.D., Kraft C., Kravitz S., Kulp D., Lai Z.,
RA Merkulov G., Milshina N.V., Mobarry C., Morris J., Moshrefi A.,
RA Nelson D.R., Nelson K.A., Nixon K., Nusskern D.R., Pacleb J.M.,
RA Reinert K., Remington K., Saunders R.D.C., Scheeler F., Shen H.,
RA Syier E., Spradling A.C., Stapleton M., Skupski M.P., Smith T.,
RA Wang Z.-Y., Wassarman D.A., Weiter E., Wang A.H., Mang X.,
RA Wang Z.-Y., Wassarman D.A., Weiterstock G.M., Weissenbach J.,
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-I- TISSUE SPECIFICITY: FAT BODY.
-I- SIMILARITY: PARTIAL WITH OTHER LIPASES (PANCREATIC, GASTRIC, HEPATIC, LINGUAL, LIPOPROTEIN, BACTERIAL, ETC.). ALSO SIMILAR LEPIDOPTERAN EGG-SPECIFIC AND YOLK PROTEINS.
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                                     InterPro; IPR000073; -
InterPro; IPR000379; -
InterPro; IPR000734; -
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                                                                                                                          EMBL; Y14367; CAA74737.1; -. EMBL; AE003699; AAF54935.1;
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Nat. Genet. 10:261-268(1995)
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Sasanuma S.-I., Sasanuma M., Tsuchiya Y., Soeda E.,
Yamazaki M., Tashiro H., Eki T.;
"Analysis of the nucleotide sequence of chromosome
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Tristem M., Hill F., Karpas A.;
"Nucleotide sequence of a Guinea-Bissau-derived
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J. Gen. Virol. 72:721-724(1991).
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-!- MISCELLANEOUS: READTHROUGH OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Viruses; Retroid
NCBI_TaxID=11715;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through a collaboratic between the Swiss Institute of Bioinformatics and the EMBL outstation
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STRAIN=ATCC 29342 / M129;
MEDLINE=97105885; PubMed=8948633;
                                                                                   InterPro;
                                                                                                                                              MEROPS; A02.002;
                                                                                                                                                                                 HSSP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mycoplasma pneumoniae. 
Bacteria; Firmicutes;
                                                                                                                  InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hypothetical
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HYPOTHETICAL PROTEIN MPN364 (H91_ORF677).
MPN364 OR MP472.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         duman immunodeficiency
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 153 KTWGDYQKV 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 KTWGQYWQV 9
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                                                                                                                                                                                                                                                                 564-ILE AND 565-GLY. SIMILARITY: THE PROT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SIMILARITY: BI
                                                                                                                                                                                                                                  KNOWN AS THE RETROPEPSIN
                                                                                                                                                                                                      B38475; GNLJCA.
                                                                                                                                                                       P04584; 1JLD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AE000047; AAB96120.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity 6; Conser
                                                                                IPR000477;
IPR001037;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ear protein.
                           IPR001584;
IPR001969;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
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LONGS TO THE MG185 / MG260 FAMILY.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   rus type 2 (isolate CAM2) (HIV-2).
Retroviridae; Lentivirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 37; DB Pred. No. 85; 1; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                There are no rest
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                                                                                                                                                                                                                                                                                                                                                                                                                                            /ed human
(HIV-2CAM2).";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Usage by
                                                                                                                                                                                                                                                                                                                                                                                    PROTEINS REMAIN TO
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3.1.26.4)].
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RESULT 28
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Best Local
  Pfam; PF00075; rnas;
Pfam; PF00075; rvp;
Pfam; PF00077; rvp;
Pfam; PF00078; rvt;
Pfam; PF00078; rvt;
PR0SITE; PS50175; A:
AIDS; Polyprotein; l
                                                                                                                                                                                                                                                                                        EMBL; U22047;
HSSP; P04584;
InterPro; IPRO
InterPro; IPRO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q74120;
01-NOV-1997
01-NOV-1997
15-DEC-1998
                                                                                                                                                       Pfam;
Pfam;
                                                                                                                                                                                                  InterPro;
InterPro;
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InterPro;
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ACT_SITE
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                           This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
15-DEC-1998 (Rel. 37, Last annotation update)
POL POLYPROTEIN [CONTAINS: PROTEASE (RETROPEPSIN)
REVERSE TRANSCRIPTASE (EC 2.7.7.49); RIBONUCLEASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pfam;
Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
Kraus G.K., Talbott
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PROSITE; PS00141; ASP_PROTEASE; 1.
PROSITE; PS50175; ASP_PROT_RETROV; 1.
AIDS; Polyprotein; Hydrolase; Asspartyl p
Nuclease; Transferase; RNA-directed DNA
CHAIN
85
183
PROTEASE
ACT_SITE
109
109
BY SIMILARI
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Badel P., B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Submitted
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human immunodeficiency virus type 2 (isolate KR)
Viruses; Retroid viruses; Retroviridae; Lentiviru
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          POL_HV2KR
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m; PF02022; Integrase_Zn; 1.
m; PF00552; integrase; 1.
m; PF00075; rnaseH; 1.
m; PF00077; rve; 1.
m; PF00077; rve; 1.
m; PF00078; rvt; 1.
SITE: PS00141; ASP_PROT_RETROV; 1
SITE: PS50175; ASP_PROT_RETROV; 1
S; POlyprotein; Hydrolase; Aspart;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JS G.K., Talbott R., Leavitt M., Luznick L., Schmidt A.
al P., Bartz C., Morton W., Wong-Staal F., Looney D.J.,
nitted (APR-1995) to the KWBL/GenBank/DDBJ databases.
PTM: CLEAVAGE SITES THAT YIELD THE MATURE PROTEINS REM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DETERMINED.
SIMILARITY: THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 pF00552; integras;
pF00075; rnaseH;
pF00665; rve; 1.
pF00077; rvp; 1.
pF00078; rvt; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PF02022;
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5; Conser
                                                                                                                                                                                                | IPR000477; -... | IPR001037; -... | IPR001584; -... | IPR001969; -... | IPR001995; -... | IPR001995; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156; -... | IPR002156;
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1JLD.
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rnaseH; 1.
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71.4%;
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O1-NOV-1988 (Rel. 09, Last sequence update)
O1-NOV-1988 (Rel. 37, Last annotation update)
15-DEC-1998 (Rel. 37, Last annotation update)
POL POLYPROTEIN [CONTAINS: PROTEASE (RETROPEPSIN)
POL POLYPROTEIN [CONTAINS: PROTEASE (RETROPEPSIN)
POLYPROTE TRANSCRIPTASE (EC 2.7.7.49); RIBONUCLEASE
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HSSP; P04584; 1JLD.
HIV; J03654; POL$2NIHZ.
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use by non-profit institutions as long as its content
modified and this statement is not removed. Usage by ar
                                    AIDS; Polyprotein; Hydrolase; Aspartyl protease;
Nuclease; Transferase; RNA-directed DNA polymeras
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NCBI_TaxID=11719;
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                                                                                                                                                 n; PF02022; Integrase_Zn;
n; PF00552; Integrase; 1.
n; PF00075; rnaseH; 1.
n; PF00065; rve; 1.
n; PF00077; rvp; 1.
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sen the Swiss Institute of Bioinformatics and the EMBL outstation -
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BY SIMILARI

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pfam; PF00077; rve; 1.
pfam; PF00078; rvt; 1.
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P12451; 085570;
01-0CT-1989 (Rel. 12, Created)
01-0CT-1989 (Rel. 12, Last sequence update)
15-DEC-1998 (Rel. 37, Last annotation update)
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Franchini G., Fargnoli K.A., Giombini F., J
Bosch M., Biberfeld G., Fenyo A.M., Albert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             InterPro; IPR001995; -. InterPro; IPR002156; -.
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een the Swiss Institute of Bioinformatics and the EN
European Bioinformatics Institute. There are no rest
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PS; A02.002; -.
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Pred. No. 1.2e+02;
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Query Match Best Local Similarity

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gp100/Pmel17 synth
PMEL 17 (GP100) pr
Melanoma-associate
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Melanoma associate
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	Modified MART-1 me	Modified MART-1 me	Modified MART-1 me	Modified MART-1 me	Immunogenic peptid	Immunogenic peptid	MART-1 melanoma an				Human melanoma ant	Human melanoma ant	Melanoma associate	MART-1 melanoma an	Gp100 peptide #1.	Immunogenic peptid	gp100 melanoma ant	Immunogenic peptid	Exemplary antigen	gp100-Pmel-117 gen	gp100(Pmel117) tum	Tumour associated		Human leukocyte an	Tumour associated	$^{\circ}$	þe	H	н	HLA Class I motif	Tumour antigen boo	Exemplary antigeni	Melanoma-derived l

## ALIGNMENTS

RESULT AAR78644

AAR78644 standard; Protein;

9 B

AAR78644;

22-JAN-1996 (first entry)

Immunogenic peptide of melanoma associated antigen gp100

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Melanoma associated antigen \ensuremath{\mathsf{gp100}} - used in vaccines and for the detection of tumours
                                     WPI; 1995-284790/38.
                                                                                  21-DEC-1994;
16-FEB-1994;
                                                                                                                                                                     Melanoma; antigen; vaccine; immunogen; primer; probe; detection; identification; tumour; gp100.
                             N-PSDB;
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                                                                                                    The peptide epitope AAW77119-W77138 were created for human tumour-specific cytotoxic T lymphocyte response. These peptides are are cysteine- depleted mutants of a native disease-specific CTL epitope. The cysteine- depleted CTL epitopes elicit a stronger or more specific CTL response than the native epitope. The epitopes can be used in a disease-specific immunogen to protect a mammal against disease in particular melanomas. The peptides may also be used to screen a sample for the presence of an antigen with the same epitope, or with a different
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Immunogenic peptides derived from the melanoma associated antigen (See AAR78639-45) may be used in the production of vaccines. Nucleotide sequences encoding the immunogenic peptides may be used as primers and probes in the detection of melanoma cells. Tumour infiltrating lymphocytes capable of binding to the melanoma associated antigen can be cultured ex vivo and returned to melanoma particles, and when radiolabelled, they may be used to identify
                                                                                                                                                                                                                           Disclosure; Page 27; 93pp; English.
                                                                  Sequence
                                                                                           cross-reactive epitope.
                                                                                                                                                                                                                                                                    Disease specific immunogen
                                                                                                                                                                                                                                                                                                                        Engelhard VH,
                                                                                                                                                                                                                                                                                                                                                                          30-JAN-1997;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tyrosinase; tyrosinase cytotoxic lymphocyte response; cytotoxic T lymphocyte; cysteine-depleted; melanoma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gp100/Pmel17 synthetic peptide epitope 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAW77119;
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                                                                                                                                                                                                                                                     lymphocyte epitope used
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                                                                                                                                                                                                                                                                                                                       Kittlesen D,
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               3.4e+05;
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                            DB 19;
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                         coding sequence encodes an expression product selected from: (1) a polypeptide at least 7 amino acids in length, having a sequence identical to the sequence of: (1) a fragment of a naturally-occurring mammalian protein; or (ii) a fragment of a naturally-occurring protein from an infectious agent which infects a mammal; (2) a peptide having a length and sequence which permits it to bind to an MHC class I or II molecule; and (3) the polypeptide or the peptide linked to a trafficking sequence AAM69763 to AAW69765, and AAW78793 to AAW78897 are peptide fragments for use in the present invention. The MPs are highly effective vehicles for the delivery of polynucleotides into phagocytic cells. They can be used for gene therapy, e.g. for treating genetic diseases, infections or tumours or for downregulating an immune response.
                                                                                                                                                                                                                                         comprises: (a) a polymeric matrix (PM) consisting of one or more synthetic polymers having a solubility in water of less that 1 mg/1; and (b) an expression vector selected from RNA molecules (at least 50% of which are closed circles) or circular plasmid DNA (at least 50% of which are supercoiled). Also described is a MP of at most 20 microns in diameter, comprising: (a) a PM; and (b) a NAM comprising an expression control sequence operatively linked to a coding sequence, where the
                                                                                                                                                                                                                                                                                                                                                                     A microparticle preparation (MP) has been developed, microparticles having a diameter of less than 100 mu
                                                                                                                                                                                                                                                                                                                                                                                                                        Disclosure; Page 10; 101pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New preparations of microparticles - comprising a synthetic polymer matrix and nucleic acid comprising an expression vector for use in
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Synthetic.
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22-JAN-1997;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      delivery; polymeric matrix; autoantigen; tumour iated peptide; pathogen; gene therapy; genetic dinregulation; immune response.
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97US-0787547
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                                                                                                                                                                                                                                                                                                                       molecules with antigen presenting cells (APCs) pretreated with principal pretreatment growth factors, and incubating the APCs with purified CDB cells in the presence of at least 2 incubation growth factors, thereby producing antigen-specific CTLs. A method for specifically killing target cells in a human patient is also provided which comprises obtaining a fluid sample containing CTLs from a patient, contacting the cytotoxic T cells with APCs pretreated with pre-treatment growth factors, where the APCs comprise class I MHC molecules. The pretreated APCs are incubated with the cytotoxic growth factors, thereby producing activated CTLs which are contacted with a carrier to form a composition. The composition can then be administered to the patient. The activated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequences shown in AAW70010 to AAW70026 represent peptides derived from melanoma-associated antigen gp100 that can bind to a human leukocyte antigen (HLA), HLA-A2.1. The peptides are used to exemplify the method of invention of producing antigen-specific cytotoxic T cells (CTLs) in vitro. The method comprises contacting immunogenic peptides from an antigen that binds class I major histocompatibility complex (MHC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Production of antigen-specific cytotoxic T cells - by incubating immunogenic peptide(s) from antigen that binds class I major histocompatibility complex molecules with pre-treated antigen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Celis E,
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                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                          CTLs can be used for treating infections, AIDS, hepatitis, h
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Example 4; Page 62; 104pp; English
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bacterial
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mannose; vaccine;
                                                                                                                                                                                                                                                                                                                                                                                                         Increasing uptake and presentation of antigen(s) - by residue(s) to antigen for increasing T cell response, e.g. vaccines against viral infection(s)
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                             22-JUN-1998 (first entry)
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                                                                                                                                                                                                                                                                      responsiveness. Vaccines conta
prevent or treat infections by,
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                                                                                                                                                                                         100.0%;
                                                                                                                                                                              0
                                                                                                                                                                                         Score 59;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                      e.g.
                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                       mannosylated antigen are used to bacteria, viruses, fungi, helminths
                                                                                                                                                                                         3.4e+05;
                                                                                                                                                                                                      DB 19;
                                                                                                                                                                                                  Length
                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                      adding
useful
                                                                                                                                                                                                     9;
                                                                                                                                                                                                                                                                      fungi,
                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                      mannose
in,
                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   T cell;
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Melanoma associated peptide analogue

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RESULT
AAY49663
                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
             14-APR-1999;
                                      21-OCT-1999
                                                                                      Synthetic.
                                                                                                                                                                Tumour antigenic peptide SEQ ID NO:30.
                                                                                                                                                                                                                                                                                                                                                                                                                                               a part of the following sequence, where the amino acid at position 2 or 8 is substituted: Lys-Thr-Trp-Gly-Gln-Tyr-Trp-Gln-Val. Vaccines comprising the peptide, an epitope of the peptide sequence encoding the peptide, or an antigen presenting cell preloaded with the peptide or antibody as above, are useful for cancer, particularly melanoma, treatment. The peptides can also be used to generate antigen reactive tumour infiltrating lymphocytes, which can also be used in vaccines. The peptides can be exploited to elicit native epitope-reactive CTL. Usage of the peptides with improved immunogenicity may contribute to the development of CTL-epitope based vaccines in viral disease and cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This sequence represents a specifically claimed example of a novel peptide, which is immunogenic with lymphocytes directed against metastatic melanomas. It is characterised in that it comprises at least
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  08-JUL-1997;
                                                             WO9953061-A2
                                                                                                                carcinoma;
                                                                                                                                                                                            14-JAN-2000
                                                                                                                                                                                                                    AAY49663;
                                                                                                                                                                                                                                            AAY49663 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Melanoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 1998-110586/10.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11-JUL-1996;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  W09802538-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Metastatic melanoma; peptide analogue; vaccine; cancer; diagnosis; antigen; CTL; immunogenic; viral disease.
                                                                                                                            tumour rejection antigen precursor;
                                                                                                                                        Human; sdph3.10; SAGE; sdp3.8; HAGE; sdp3.5; TRAP; sarcoma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (ALKU ) AKZO NOBEL NV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
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                                                                                                                                                                                                                                                                                                           ktwgqywqv
                                                                                                                                                                                                                                                                                                                       KTWGQYWQV 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1;
                                                                                                                                                                                                                                                                                                                                                            9;
                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    associated peptide analogues -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Figure 1; 47pp; English
                                                                                                                 cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                           100.0%; ilarity 100.0%; Conservative
                                                                                                                                                                                          (first entry)
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             99WO-US08163
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                                                                                                                                                                                                                                          peptide;
                                                                                                              immune response;
                                                                                                                                                                                                                                                                                                                                                            0,
                                                                                                                                                                                                                                                                                                                                                           Score 59; DE Pred. No. 3.4
                                                                                                                diagnosis
                                                                                                                            tumour associated nucleic acid;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      useful in
                                                                                                                                                                                                                                                                                                                                                                       3.4e+05;
                                                                                                                                                                                                                                                                                                                                                                                    DB 19;
                                                                                                                                                                                                                                                                                                                                                            0;
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                                                                                                                                                                                                                                                                                                                                                                                 Length 9;
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          07-APR-1998;
                                    08-OCT-1999
                                                             FR2776926-A1
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98FR-0004323

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AAY53524
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Best Local S
Matches S
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27-JUL-1998;
30-OCT-1998;
30-OCT-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             complexes are used for treating cancer, especially sarcoma and carcinoma, in humans and other animals. Compositions containing autologous cytolytic T cells (CTL), specific for the HLA/(I) complex, are similarly useful, also transformed cells that stimulate such CTL in vivo. (II) are also used: (i) as source of therapeutic antisense sequences that reduce expression of (II); (ii) for recombinant production of (I); (iii) particularly its fragments, as primers and probes in usual hybridisation and amplification assays, for diagnosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               prognosis and monitoring of tumours, or for measuring binding specificity of HLA molecules or CTL clones; (iv) to identify related sequences; and (v) for generating transgenic animals, e.g. for studyi cancer and immune responses to it. (I) are used to raise specific antibodies (Ab) and therapoutically. Ab are used to diagnose tumours immunoassays, also for delivering drugs, toxins, imaging agents etc. (I) expressing cells, AAY49677 to AAY49670 represent exemplary tumour
                                                                                                                 Lipopeptide; epitopelectrical charge;
                                                                                                                                                                                           Human melanoma
                                                                                                                                                                                                                                         18-JAN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The present invention describes sarcoma-associated gene products (I) Agents, specifically sarcoma associated nucleic acids (II) or their expression products that are tumour rejection antigens (TRA), that
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New nucleic acid encoding diagnosing, e.g. treating
  Homo
                                                                    melanoma; malaria;
                                                                                        electrical charge; hydrophilicity; human immunodeficiency virus; hepa
                                                                                                                                                                                                                                                                                   AAY53524;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Disclosure; Page 25; 93pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Martelange V,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (LUDW-) LUDWIG
                           Synthetic
                                                                                                                                                                                                                                                                                                                                  AAY53524 standard;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 KTWGQYWQV
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sapiens
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9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              peptides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                        epitope; cytotoxic T lymphocyte; harge; hydrophilicity; vaccine; ir deficiency virus; hepatitis B virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         98US-0060706.
98US-0122989.
98US-0183706.
98US-0183789.
                                                                                                                                                                                           Pme17
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                                                                                                                                                                                                                                                                                                                                  Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              given in the present invention.
                                                                    parasite.
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                                                                                                                                                                                      (gp100)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sarcoma-associated gene products, useful for
and preventing cancer -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Boon-Falleur
                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                      (aa 154-162) binds HLA-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 59;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3.4e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 20;
                                                                                           virus; papilloma
                                                                                                                 immune response; HIV;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             studying
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
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07-APR-1998;

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Best Local S
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          spacers. These spacers comprise sequences of amino acids which carry an overall electrical charge in neutral media to ensure that the lipopeptide is hydrophilic. The peptides ANY53301-Y53549 represents examples of peptide epitopes used to generate the lipopeptides. These an used in therapeutic or prophylactic compositions and vaccines to induce
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI;
                                                                                                                                                                                                                                  Human leukocyte antigen; binding; immunogenic; glycoprotein; MHC; HLA; immune response; T cell activation; major histocompatibility complex; cytotoxic T lymphocyte; CTL; tumour rejection; viral infection; cancer prostate cancer; hepatitis B; hepatitis C; AIDS; renal carcinoma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The invention relates to the generation of a lipopeptide comprising at least one auxiliary T epitope, at least one cytotoxic T lymphocyte (CTL) epitope and at least one lipid residue with (i) the epitopes and lipid portion and (ii) the epitopes, being separated independently by peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               vaccines
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (INRM ) INSERM INST NAT SANTE & (CNRS ) CNRS CENT NAT RECH SCI. (INSP ) INST PASTEUR LILLE.
           WPI; 1999-551214/46
                                  Sette A,
                                                            (EPIM-)
                                                                                    13-MAR-1998;
                                                                                                            13-MAR-1998;
                                                                                                                                   16-SEP-1999
                                                                                                                                                           WO9945954-A1
                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                         vaccine; immunisation
                                                                                                                                                                                                                                                                                               Immunogenic peptide having a human leukocyte antigen binding motif #227
                                                                                                                                                                                                                                                                                                                        01-DEC-1999
                                                                                                                                                                                                                                                                                                                                                 AAY47616;
                                                                                                                                                                                                                                                                                                                                                                        AAY47616 standard; Peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Disclosure; Page 24; 35pp; French
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        separated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New lipopeptide containing lipid r separated by peptide spacers that
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Le Gal FA,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                             KTWGQYWQV 9
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
9; Conser
                                                            EPIMMUNE INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    immune responses against human viruses; p53 of melanoma or the
                                  Kubo RT, Sidney J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  by peptide spacers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Guillet JG,
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                                                                                   98WO-US05039
                                                                                                            98WO-US05039
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Pred. No.
                                  Ceris
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
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t impart
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    inmunodeficiency, hepatitis B
the malaria parasite.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3.4e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DВ
                                  Grey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and two epitopes, all hydrophilicity, useful
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ,HM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20;
                                    MH,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                    Southwood
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                                                                                                                                                                                                                                                cancer;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CC AAY45390 to AAY48214 represent specifically claimed immunogenic peptides
CC having a human major histocompatibility complex (MHC) Class I (also
CC known as human leukocyte antigen (HLA)) binding motiff. The immunogenic
CC peptides can bind to a specific HLA allele (i.e. HLA-A subtypes
CC HLA-A2.1, A1, A3.2 or A24.1 or HLA-B or C) and induce a cytotoxic T cell
CC response against the antigen from which the peptide is derived.
CC Cytotoxic T lymphocytes (CTLs) which destroy antigen bearing cells are
CC commally induced by an antigen in the form of a peptide fragment bound
CC to a HLA molecule, rather than the intact foreign antigen itself, and
CC are particularly important in tumour rejection and in fighting viral
CC infections. The peptides are therefore useful therapeutically to treat
CC or prevent viral infections and cancers in mammals (especially humans)
CC e.g. prostate cancer, hepatitis B and C, AIDS, and renal carcinoma.
CC They can be administered as vaccines to elicit an immune response in
CC cancer, or used to treat chronic or acute conditions. They are also
CC useful diagnostically, and can be used to induce a cytotoxic T cell
CC response, by contacting a cytotoxic T cell with the peptide e.g. to
CC produce CTLS ex vivo for infusion back into a patient. The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local
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                                                                                                                                                                    06-MAR-1998;
                                                                                                                                                                                                 03-MAR-1999;
                                                                                                                                                                                                                                                                W09945098-A2
                                                                                                                                                                                                                                                                                                                         Human; protein delivery; Yersinia sp.; effector gene; mutant; antigen; immune response; cytotoxic T-lymphocyte; CTL; vaccination; treatment; pathological disorder; gp100-Pmell17.
                                                                                                                                                                                                                                                                                                                                                                                       Human gp100-Pmel117 peptide
                                                                                                                                                                                                                                                                                                                                                                                                                        17-NOV-1999
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 1;
                                                                                                                     (VBRU/)
(CORN/)
                                                                                                                                                                                                                                  10-SEP-1999
                                                                                                                                                                                                                                                                                              Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    polynucleotides encoding the immunogenic peptides are also useful therapeutically and for immunisation as above.
                                                                                         (N008)
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                                                                                                                                                                                                                                                                                              sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ktwgqywqv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KTWGQYWQV 9
                                                                                       ') VAN DER BRUGGEN P E
') CORNELIS G R.
') BOLAND A M.
') BOON-FALLEUR T R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        l Similarity
9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  standard; peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Page 116; 150pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%; ilarity 100.0%; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AA;
                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                    98US-0036582
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Pred. No.
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3.4e+05;
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0

New mutant Yersinia strains useful for treating a pathological disorder

WPI; 1999-540840/45

Van

Der Bruggen

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Cornelis

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Boland

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Boon-Falleur

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RESULT
AAY40211
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mutation(s) in effector-encoding gene(s) and deficient in the production confunction(s) in effector protein(s). The invention describes (1) a quintuple mutant Yersinia strain, having the designation Yersinia confunction confunction confunction confunction of Yersinia pseudotuberculosis yopeHAOJ; (2) and confunction vector (EVI) for delivering a heterologous protein into a confunction you would be supposed in the solution; (3) a Yersinia or confunction you would be supposed in the solution; (3) a Yersinia or confunction of the supposed protein into a confunction of the supposed protein into a confunction of the supposed protein into a confunction of the supposed protein into a confunction of the supposed protein into a confunction of the supposed protein of the subsequence of the supposed protein into a confunction of the supposed protein; (5) a method for inducing a cytotoxic T-lymphocyte (CTI); (5) a method for inducing a cytotoxic specific for a heterologous protein; (7) a method for determining the efficacy of confunction regimen in a subject. Yi is used to treat a pathological disorder, by providing recombinant versinia for the safe delivery of proteins into eukaryotic cells. ANY33147-X33178 are confunction in the subsequence of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
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Best Local Similarity
Disclosure; Page 35; 53pp; French
                                      cancer or
                                                   New lipopeptide comprising C-terminal interferon-gamma fragment with attached lipophilic groups, used as interferon mimic, e.g. for treat:
                                                                                                                                                                                                                                                                                                                                                                                                                           CD4+ epitope; B epitope; lipopeptide; interferon gamma; adjuvant; vaccine; tumor; infection; immune response; cytokine profile; acquired immune deficiency syndrome; papilloma; cancer; hepatitis;
                                                                                                          WPI; 1999-510734/43.
                                                                                                                                                                            (INRM ) INSERM INST NAT SANTE & RECH MEDICALE (INSP ) INST PASTEUR LILLE.
                                                                                                                                                                                                                                 06-FEB-1998;
                                                                                                                                                                                                                                                                      06-FEB-1998;
                                                                                                                                                                                                                                                                                                                                          FR2774687-A1
                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                              autoimmune disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cytotoxic T cell; T lymphocyte; CD8+ epitope; T helper cell; CD4+ epitope; B epitope; lipopeptide; interferon gamma; adju
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Amino acid sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       19-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAY40211;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAY40211 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This invention describes a novel mutant Yersinia (Y1) strain, comprising mutation(s) in effector-encoding gene(s) and deficient in the production
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Example
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                                                                                                                                             Guillet JG,
                                    virus infection
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                   98FR-0001439
                                                                                                                                                                                                                                                                      98FR-0001439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Peptide; 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   of a human melanoma epitope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%;
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                                                                                                                                             Ver Waerde C,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 59;
Pred. No.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CC I lymphocytes (CDM+ epitopes), Thelper cells (CDM+ epitopes), or elements of the composition of the invention. The specification describes a CC lipopeptide that has a peptide part derived from mammalian interferon CC gamma (IFNg) and one or more lipophilic parts comprising a linear or CC branched, (un)saturated 4-20C hydrocarbyl chain or a steroid. The CC lipopeptide manics the activity of IFNg. Compositions comprising the CC lipopeptide are used to treat or prevent any condition that responds CC to IFNg, and as adjuvant for vaccines (particularly those directed against tumors, viral or parasitic infections), to stimulate or creationar applications are treatment of infections (particularly cancer) and hepatitis, but also bacterial, fungal, parasitic or helminth); cancers C (particularly or kidney, cutaneous T cells or vorary, chronic composition or more than the content of medications comprising the content of historic comprising the content of infections (particularly cancers) and hepatitis, but also bacterial, fungal, parasitic or helminth); cancers content of historic content of historic cancers are treatment of infections (particularly cancers) and the particularly of kidney, cutaneous T cells or vorary, chronic cancers are treatment of infections (particularly cancers).
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Best Local Similarity
Matches 9; Conserv
                             Disclosure; Page 37; 60pp; French.
                                                               Immunogenic lipopeptide micelles containing cytotoxic and helper ?
                                                                                                                  WPI; 1999-349509/30
                                                                                                                                                                                                 (CNRS ) CNRS CENT NAT RECH SCI.
(INRM ) INSERM INST NAT SANTE &
(INSP ) INST PASTEUR LILLE.
                                                                                                                                                                                                                                                                                                       03-DEC-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Melanoma-derived lipopeptide epitope #8 for mixed micelles
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             14-SEP-1999
                                                                                                                                                  Tartar
                                                                                                                                                                                                                                                                                                                                         04-JUN-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                           melanoma; Plasmodium falciparum; malaria.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cytotoxic T-lymphocyte; epitope; lipid; helper T-
tetanus; toxin; vaccine; HIV; hepatitis B virus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Micelle; microaggregate;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAY26867;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAY26867 standard;
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                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAY40123-Y40379
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                                                                                                                                                  Bourgault VI,
Wieruszeski JM;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
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                                                                                                                                                                                                                                                                      97FR-0015246
                                                                                                                                                                                                                                                                                                         97FR-0015246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       represent epitopes that are able to activate cytotoxic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            induction;
                                                                                                                                                                   Gras-Masse H,
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                      RECH MEDICALE
                                                                             comprising lipopeptides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       immune response; lipopeptide;
pid; helper T-lymphocyte; HTL;
tis B virus; papilloma virus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 allergy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    w
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                                                                                                                                                                     Guillet JG,
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s 0;
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HBV;
p53;
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RESULT
AAY01753
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Best Local
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                                                                      The present sequence represents an exemplary tumour associated genetic antigen. The specification describes a MAGE-3 tumour associated gene. Peptides (AAY01721-25) that bind human leucocyte antigen (HLA) Class molecules can be derived from the MAGE-3 protein. These peptides and autologous CD4+ cells that bind to a complex of MAGE-3 peptide and HLA Class II, are used to treat MAGE-3 related diseases, particularly cancers (e.g. melanoma, osteosarcoma, leukemia and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (LUDW-)
(UYVR-)
various forms of carcinoma). The peptides are also used to produce specific antibodies. Detection of of the peptides, e.g. in binding assays, particularly with antibodies, is used for diagnosis of such
                                                                                                                                                                                                                                                                           Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                          WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Boon-Falleur T, Chau
Luiten R, Stroobant
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                                                                                                                                                                                                                                                                                                                                 molecules
                                                                                                                                                                                                                                                                                                                                                         Isolated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               12-SEP-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                04-SEP-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   osteosarcoma;
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9; Conserv
                                                                                                                                                                                                                                                                                                                                                   peptides that bind to human leucocyte antigen class
                                                                                                                                                                                                                                                                           Page 29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first
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Pred. No.
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Van Der
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Bruggen
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Sequence

Matches 9; Conser

100.0%; ilarity 100.0%; Conservative

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Mismatches

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Best Local Similarity
Matches 9; Conserv
                                                                                                                    non-adjuvant with the peptide which includes the antigen, in an amount effective to reduce the initial immune response. Method (A) is used to enhance the immune response against tumour cells expressing tumour rejection antigens, and against pathogens in subjects having human leukocyte antigen-presenting molecules. Method (B) is used to reduce the immune response in allergy, autoimmune disease, and allograft rejection. Method (A) provides an immunisation method which, unlike prior art, is
                                                                                                                                                                                                                                                                                                                                                                                                                                                   used in the method of the invention. The method is for for modulating an immune response in a mammal against an antigen, and comprises:

(A) inducing an immune response by: (1) administering a virus containing a nucleic acid molecule encoding the antigen or its precursor to generate an immune response; and (ii) administering at least one booster dose comprising a peptide including the antigen, in an adjuvant, in a combined amount effective to enhance the initial immune response; or

(B) reducing an immune response as defined for (A) but using a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Immunization methods using viruses expressing antigen for priming and booster immunizations - useful for modulating immune responses against antigen, e.g. enhancing immune response against tumour cel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             allograft rejection
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Disclosure; Page 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 1999-105612/09
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                                                                                       not limited
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sequence represents a tumour antigen booster peptide that can be in the method of the invention. The method is for for modulating % \left( 1\right) =\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +\left( 1\right) +
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response enhancer; tumour cell; tumour rejection antigen;
yte antigen-presenting molecule; autoimmune disease;
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                                                                                           host immune
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. 3.4e+05;
                                                                                       against viral vectors.
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                                                                                                                   Matches
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Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                             The present invention describes a method of inducing and/or sustaining an immunological cytotoxic Tlymphocyte (CTL) response in a mammal. The method comprises: (a) delivering an antigen to the mammal at a level to induce an immunological CTL response in the mammal; and (b) maintaining the level of the antigen in the mammal's lymphatic system to maintain the immunologic CTL response. The method can be used for the delivery of e.g. a differentiation antigen, a tumour-specific multilineage antigen, an embryonic antigen, an oncogene antigen, a mutated tumour-suppressor gene antigen, or a viral antigen. They can be used for the treatment of disease such as cancer, e.g. malignant melanoma or infectious disease, e.g. viral disease such as hepatitis or AIDS. Sustained antigen delivery to the lymphatic system provides for potent CTL stimulation that takes place in the milieu of the lymphoid organ, and it sustains stimulation
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                                                                                                                                                                                                                                                                                                                                                    that is necessary to keep CTL active, cytotoxic and recirculating through the body. AAY10071 to AAY10639 represent examples of pept
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Disclosure; Page 40; 199pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Inducing a cytotoxic T lymphocyte response - by maintaining of antigen in the lymphatic system of a mammal so as to prov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 1999-120514/10
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                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sustained CTL response, used to treat,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10-DEC-1997;
10-JUL-1997;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Synthetic.
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                                                        KTWGQYWQV 9
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9; Conserv
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                                                                                                                   Conservative
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97CA-2209815
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                                                                                                                                                                                                                                                                                                                               the present invention.
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                                                                                                                Score 59; DB
Pred. No. 3.4
0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     u mammal so as to provide e.g. AIDS
                                                                                                                                                                               DB 20;
                                                                                                                                            .4e+05;
                                                                                                                                                                     Length 9;
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                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
Matches 9; Conserv
                            Cytotoxic T lymphocyte (CTL) epitope SEQ ID NO:31.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Microparticles useful for administering a nucleic acid into the mucosal tissue preferably vaginal tissue of an animal, comprises a polymeric matrix, a lipid and a nucleic acid molecule -
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ATPase; Hsp70;
                                                           05-JAN-2001
                                                                                         AAB23679;
                                                                                                                       AAB23679 standard;
                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Disclosure; Page 14; 96pp; English.
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27-MAY-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         major histocompatibility complex;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Microparticle;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MHC class I associated immunogenic peptide SEQ
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                                                                                                                                                                                                                                                                                                                                     9 AA;
                                                                                                                                                                                                                                                           Conservative
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heat shock protein; cytotoxic T lymphocyte; CTL;
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99US-0321346
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                                                                                                                     Peptide;
                                                                                                                                                                                                                                                                        100.0%;
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Pred. No. 3.4e+05;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The present invention describes a fused protein (I) prepared from a peptide containing a CTL (cytotoxic T lymphocyte) epitope recognised by peptide containing a CTL (cytotoxic T lymphocyte) epitope recognised by cytotoxic T cells and a protein containing the ATPase domain of a heat shock protein. Also described are: (I) a drug composition containing (I) as active ingredient; (2) a DNA encoding (I); (3) an expression vector containing the DNA of (2); and (4) a transformant which can retain the expression vector of (3). (I) has cytostatic, immunostimulant and protozoacide activities, and can be used as a cellular immune response inducer. The protein is useful as an active ingredient for drug compositions in preventing and/or treating infectious diseases such as malaria or cancer e.g. to provide systemic immunity against leukaemia. The present sequence represents a specifically claimed CTL epitope for use in a fused pretein of the present inpution of the protein of the present input to make the present input to make the present input to make the present input to make the present input to make the present input to make the present input to make the present input to make the present input to make the present input to make the present input to make the present input to make the present input to make the present input to make the present input to make the present input to make the present input to make the present input to make the present input to make the present input to make the present input to make the present input to make the present input to make the present input to make the present input to make the present input to make the present input to make the present input to make the present input to make the present input to make the present input to make the present input to make the present input to make the present input to make the present input to make the present input to make the present input to make the present input to make the present input to make the present input to make the present input to make the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Fused protein capable of inducing cellular immune response, useful as active ingredient for drug compositions in preventing and/or treating infectious diseases such as malaria or cancer \cdot
                                                                                                                                                                                                  EphA3;
CD4+ T
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cytostatic; immunostimulant; cellular immune response inducer;
                                                                                                                                                                                                                                                                    Antigenic
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                     18-FEB-2000; 2000WO-US04326
                                                                 31-AUG-2000
                                                                                                           WO200050589-A1
                                                                                                                                                        Homo
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                                                                                                                                                                                                HLA class II-binding peptide; lymphocyte; tumour associated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  in a fused protein of the present invention.
                                                                                                                                                                                                                                                                    peptide
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                                                                                                                                                                                                                                                                    tumour rejection antigen
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                                                                                                                                                                                                human
gene;
                                                                                                                                                                                                                       leukocyte antigen; antigen
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Matches S
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                                                                                                                                                                                                                                                                gpl00 Pmel117; human; Tumour Rejection Antigen; TRA; tumour; cancer;
HLA; Human Leucocyte Antigen; MHC; Major Histocompatibility Complex;
cytolytic T-lymphocyte; immune response stimulator; prophylaxis; then
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Novel tyrosine kinase receptor, EphA3 human leukocyte antigen (HLA) class II binding peptide and nucleic acid encoding the receptor, useful for diagnosing and treating conditions characterized by expression of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI;
                                                                                                                                                                                                                                                    diagnosis;
                                                                                                                                                                                                                                                                                                                                                                                                    AAY71520 standard; peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAB08668-B08704 represent antigenic peptides characteristic of tumours. The peptides may be combined in vaccines with a human EphA3 HLA (human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             for diagnosing and 
EphA3 gene -
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08-OCT-1999;
                                     WPI; 2000-412317/35
                                                                                                                    27-NOV-1998;
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                                                                                                                                                                                                 WO200032769-A2
                                                                                                                                                                                                                          Homo sapiens.
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                                                                                         LUDWIG INST CANCER RES
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ilarity 100.0%;
Conservative
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Novel polypeptides have an ability to

expressed in tumor cells useful for treating can complex with a major histocompatibility complex

cancers

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AAB02622
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The present invention relates to MAGE-A3 (tumour associated gene product) human leukocyte antigen (HLA) class II-binding peptides (s. AAB02566-B02595, and AAB02633-B02637). These peptides are presented
                                                                                    Disclosure;
                                                                                                                             New MAGE-A3 class II binding peptides, useful tumours, are fragments of MAGE-A3 which bind tlymphocytes by human leukocyte antigen class :
                                                                                                                                                                                                                 WPI; 2000-317713/27.
                                                                                                                                                                                                                                                                                  Schultz
                                                                                                                                                                                                                                                                                                      Chaux P,
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                                                                                    Page 33;
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elemans K, Corthals
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The present invention describes isolated peptides which bind to human leukocyte antigen (HLA)-B35 molecules leading to recognition and lysis of the resulting complexes by cytolytic T cells. The isolated peptide are sometimes derived from tyrosinase. Compositions comprising the peptides of the invention can be used to generate immune responses, preferably in humans, but also in non-human animals to generated immu components which can then be used to treat humans or diagnostically. Therapeutically, the peptides are useful in generation of cytolytic Teells either in vitro or in vivo which specifically lyse pathogenic cells. The peptides can also be used to identify HLA-B35 positive cells, or to remove HLA-B35 positive cells from mixtures containing such cells. Nucleic acid molecules encoding the peptides can be used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cells in the context of HLA class II molecules. The peptides stimulate the activity and proliferation of CD4+ T lymphocytes. The invention also includes nucleotide sequences encoding MAGE-3A peptides (see AAA37928 and AAA37940). The peptides and nucleotide sequences can be used to create antibodies against the MAGE-A3 peptides, the antibodies, peptides and nucleotide sequences can be used to create a vaccine. The peptides are used to dispose or treat a disorder characterized by expression of MAGE-3, particularly cancer. The methods can also be used in the diagnosis of disorders associated with MAGE-3 expression. Included in the invention are other human tumour antigens (see AAB02596-00. Included in the invention used in the course of the invention (see AAB37929-A37937 and PCR primers used in the course of the invention (see AAB37929-A37937).
                                                                                                                                                                                                                                               Isolated peptides, sometimes derived HLA-B35 leading to recognition and ly cytolytic T cells -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human leukocyte antigen; HLA-B35; binding; recognition; cytolytic T cell; tyrosinase; immune response; diagnosis identification; human.
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                                                                                                                                                                                                                Example 3; Page 9; 20pp; English.
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            A novel method of isolation of cytotoxic T-lymphocytes (CTL) clones comprises successive steps of stimulation and testing of lymphocytes with antigen presenting cells (APCs) which present antigens derived from different expression systems. The CTL clones isolated recognize specific antigenic peptides of proteins, preferably of the MAGE family. The APC is autologous and each expression systems is different from at least one of the other expression systems, therefore isolating a cytotoxic T cell clone specific for the protein. The method can also be used to identify an antigenic peptide epitope. Isolated CTL clones
                                                                                                                                                                                                                                                                                                    Isolation of cytotoxic T-lymphocytes clones by successive steps stimulation and testing of lymphocytes with antigen presenting contains which present antigens derived from different expression systems
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                                                                                                                                                                                                                                                        Disclosure; Page 22; 99pp; English.
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09-APR-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TRAVERSARI C.
STROOBANT V.
CORNELIS G R.
BOON-FALLEUR T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CHAUX P.
LUITEN R.
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DUFFOUR M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity 100
9; Conservative
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Warnier G;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Boon-Falleur T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 59; DE
Pred. No. 3.4
); Mismatches
  leukocyte antigen
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cytotoxic T lymphocyte; CTL; complex;
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hes 0;
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Van Der Bruggen
  (HLA) complex
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ggen P;
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Best Local
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                       lymphocytes. Polypeptide and nucleic acids derived from the alternate ORF of macrophage-colony stimulating factor are useful for enriching selectively a population of T lymphocytes with CDB+ T lymphocytes. They are also useful for diagnosing a disorder characterized by expression of the polypeptide, and for identifying functional variants and mimetics.
                                                                                             rejection antigen precursor of the invention is encoded by an alternative open reading frame (ORF) of human macrophage colony stimulating gene. Peptides derived from the alternative ORF of macrophage-colony stimulating factor, when presented by an antigen presenting cell having a human leukocyte antigen (HLA) class I molecule, effectively induce the activation and proliferation of CD8+ cytotoxic T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The the
                                                                                                                                                                                 AAY84270-Y84303 represent peptides which are tumour associated antigens. They can be administered in conjunctin with the tumour rejection antigen precursor of the invention to induce anti-tumour reponses. The tumour
                                                                                                                                                                                                                                                                                Isolated polypeptide used to treat subjects having a disorder characterized by expression of alternative open reading frame macrophage-colony stimulating factor comprises 25 amino acid
                                                                                                                                                                                                                                         Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTL cells specific for the complexes, peptides or cells which present complexes on the cell surface are useful for treating pathological ditions characterized by abnormal expression of the complexes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KTWGQYWQV 9
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9; Conser
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     n antigen; macrophage colony stimulating 
ny stimulating factor; antigen presenting 
antigen; CD8+ cytotoxic T lymphocyte.
                                                                                                                                                                                                                                         21;
                                                                                                                                                                                                                                                                                                                                                                      Van Den Eynde B,
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Pred. No.
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hes 0;
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Query Match Best Local Similarity

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RESULT :
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                                              CC diagnosed or monitored by contacting a non-testis biological complex with an agent that binds to the complex and determining complex with an agent that binds to the complex and determining complex and determining complex and determining complex and determining complex and determining complex and determining the complex and there are also by administering autologous cytotoxic T-cells sufficient to a magnificant to deterministering autologous cytotoxic T-cells sufficient to complex and instead of the HERV-AVI3-B genes, to express for determining the compression of HERV-AVI3-B genes, to express tumor associated complypeptides in vivo and in vitro and to prepare fragments of such complypeptides to synthesize antibodies. Antigenic peptides of CC polypeptides to synthesize antibodies and/or cytotoxic T complored complex for HERV-AVI3-B genes and for determining complex fusion proteins, as components of immunoassay and for determining complex fusion proteins, as components of immunoassay and for determining complex fusion proteins, as components of immunoassay and for determining complex fusion proteins, as components of immunoassay and for determining complex fusion proteins, as components of immunoassay and for determining complex fusion proteins are presented by MHC complex fusion for HERV-AVI3-B proteins. Peptides derived from complex fusion of hybrid nucleic acids or polypeptide antigen by coursesponds to amino acids 154-162 of the gp100(Pme1117) polypeptide. Corresponds to amino acids 154-162 of the gp100(Pme1117) polypeptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                               tumors, especially melanomas) can be treated or ameliorated by administering antisense nucleic acid to reduce the expression of tumour associated genes such as HERV-AVI3-B. Progression of a disorder characterized by the expression of the HERV-AVI3-B endogenous retrovirus tumor rejection antigen (ERTRA) can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Disclosure; Page 26; 77pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mediated
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gp100(Pmel117) tumour associated antigen
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Novel nucleic acids encoding melanoma associated gene products and their fragments and variants, useful for treating endogenous retrovirus
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Tumour; tumour associated antigen; retrovirus; antisense;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tumor associated disorders (e.g. endogenous
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        treatment;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             24
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   tumors, especially melanomas
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CTL; helper T-lymphocyte; MAGE; BAGE; GAGE; RAGE;
beta catenin; tyrosinase; Melan-A; gp100; PRAME.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Peptide;
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CC first and second binding partners (BPI, BP2); and (ii) several immune CC complexes (IC) containing a major histocompatibility complex (MRC) CC molecule (I), a beta2-microglobulin molecule (b2MG) and a peptide (II) CC that binds specifically to (I). (A) are used for analysis of cytolytic CC T cells (CTL) for characterisation of an immune response to tumours or CC for monitoring vaccine trials. Particularly they are used to isolate or CC to the particular CTL (especially those in tumour-infiltrated lymph CC nodes), including visualisation of antigen-specific CTL and determination CC if the cells have been activated by in vivo exposure to antigen. Isolated CC precursor cells may be expanded in vitro to produce cells with high CC tumouricidal activity, for therapeutic or diagnostic use. A method from CC the present invention allows: (i) preselection of T cells clones for use CC in immunotherapy according to their homing molecules; and (ii) improves the lytic activity of T cells populations by inhibition of natural CC killer cell receptors. The present sequence represents a peptide cused in the exemplification of the present invention.
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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New isolated complex of binding partners and immune complexes containing major histocompatibility molecules and peptide, used to isolate and detect cytotoxic T cells, particularly directed against
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ilarity 100.0%;
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Pred. No. 3.4e+05;
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Best Local :
                                                                                                                                                                                                                 of MAGE-Al such as cancers e.g. melanomal, squamous cell carcinomas, colorectal carcinomas, osteosarcomas, and lymphocytic leukemias. Peptides derived from the MAGE-Al HLA binding protein are useful in
                                                                                                                                                                                                                                                                 of tumours. They can be used to enhance the immune response of vaccines comprising peptides derived from human MAGE-Al HLA (human leukocyte antigen) class II-binding protein. Peptides derived from the MAGE-Al HLA binding protein stimulate the activity and proliferation of CD4+T lymphocytes. The MAGE-Al HLA binding protein is useful as a diagnostic agent for diagnosing a disorder characterized by expression of MAGE-Al.
                                                                                                                                                                                                                                                                                                                                                                                      Novel MAGE-Al human leukocyte antigen class II peptides which bind to and are presented to the class II molecules, useful for inducing immune response and treating cancers characterized by expression of MAGE-Al -
                                                                                                                                                                                                                                                                                                                                                                 Disclosure; Page 33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14-JUN-2000;
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            AAR78643 standard; Protein;
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                                                                                                                                                                                                         production of anti-tumour vaccines
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Matches 9
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metastatic melanoma; tumour-associated antigen;
immunogenic peptide; diagnosis; prognosis; prophylaxis;
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                                                  WO9529193-A2
                                                                                                    Synthetic
                                                                                                                                                 therapy; vaccine
                                                                                                                                                                                                                                                                                gp100 melanoma antigen immunogenic peptide (G10-154)
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16-FEB-1994;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             22-JAN-1996
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                                                                                                                                                                                                                                                                                                                                  25-APR-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Immunogenic peptides derived from the melanoma associated antigen (See AAR78639-45) may be used in the production of vaccines.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Adema GJ, Figdor CG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (ALKU ) AKZO NOBEL NV
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9; Conser
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94EP-0200337
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                                                                                                                                                                                                                                                                                                                                                                                                                                    Peptide;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 59; DB 16;
Pred. No. 0.0024;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 10;
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Best Local
Melanoma associated antigen detection of tumours
                                                                WPI; 1995-284790/38
N-PSDB; AAQ96055.
                                                                                                                                                                                                                               21-DEC-1994;
16-FEB-1994;
                                                                                                                                                                                                                                                                                                                                                                                              EP668350-A1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAR78642 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          immunization) of melanoma. Antibodies against melanoma-specific antigens and its immunogenic peptides may be used in the detection and isolation of the antigen from a sample, the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The immunogenic peptide is derived from cDNA25 (AAR84854), melanoma antigen derivative of gp100 (see AAR84855). The peptide and its derivatives (see AAR84200-R84211) are used medicaments (vaccines) for the treatment or prevention (by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA encoding melanoma antigens recognised by T-lymphocytes - also vectors, host cells and antibodies, used to detect, treat and immunise animal against melanoma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 1995-382963/49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Kawakami Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 05-APR-1995;
22-APR-1994;
                                                                                                                                      Adema
                                                                                                                                                                                  (ALKU ) AKZO
                                                                                                                                                                                                                                                                                                   14-FEB-1995;
                                                                                                                                                                                                                                                                                                                                                23-AUG-1995
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Melanoma; antigen;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Immunogenic peptide of melanoma associated antigen gp100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        22-JAN-1996
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (USSH ) US SEC DEPT HEALTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ldentification;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (melanoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             29
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||||||||
| ktwgqywqv 9
                                                                                                                                      GJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
9; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 or metastatic melanoma).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         of which is indicative of a disease state
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Page 131; 184pp; English.
                                                                                                                                    Figdor CG;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10
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                                                                                                                                                                                    NOBEL NV.
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                                                                                                                                                                                                                               94EP-0203709
94EP-0200337
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94US-0231565
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tumour;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             vaccine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    entry)
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                   gp100
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          immunogen;
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Pred. No. 0.0
); Mismatches
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                   used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        primer; probe; detection;
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                     vaccines
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                     and
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Query Match
Best Local Similarity
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Best Local S
Matches 9
                                                                                              The present invention relates to a composition for eliciting an immune response to a target molecule comprising an immunological adjuvant and one or more peptides. The present sequence is one peptide. The peptides are similar to, but different from, a target peptide e.g. Gp100. Gp100 is a protein associated with melanoma. The present peptide can elicit the production of antibodies against Gp100, and so can be
                                                                 Sequence
                                                                                                                                                                                                  New antigenic especially in
                                                                                                                                                                                                                                     WPI;
                                                                                                                                                                                                                                                          Bradwell
                                                                                                                                                                                                                                                                                                      13-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                       GB2351905-A.
                                                                                                                                                                                                                                                                                                                                                                                             Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                Gp100; melanoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gp100 peptide
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAB61647;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              associated antigen can be cultured ex vivo and particles, and when radiolabelled, they may be tumour deposits.
                                                                                                                                                                            Disclosure;
                                                                                                                                                                                                                                                                                                                           13-APR-2000;
                                                                                                                                                                                                                                                                                                                                                 17-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAB61647 standard; peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nucleotide sequences encoding the immunogenic peptides may as primers and probes in the detection of melanoma cells. I infiltrating lymphocytes capable of binding to the melanoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 5;
                                                                                                                                                                                                                                                                                (BIND-) BINDING SITE LTD
                                                                                                                                                                                                                                                                                                                                                                                                                            [mmunostimulant;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mmunogenic peptides derived from the melanoma associated antigen See AAR78639-45) may be used in the production of vaccines.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        30
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                                                                                       to treat
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9; Conser
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                                                                 30
                                                                                                                                                                            Page 18; 40pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                            2000GB-0008992
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                                                                                                                                                                                                  Mead
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                                                                                       melanoma
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                                                                                                                                                                                                                                                                                                                                                                                                                            vaccine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      entry)
                   100.0%;
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                     Score 59; DB 22; Pred. No. 0.0071;
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Pred. No.
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0.0026;
thes 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                the melanoma
                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 11;
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                                 30
                                                                                                 present peptide
and so can be
                                                                                                                                                                                                             responses,
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## ALIGNMENTS

RESULT 138400

N;Alternate names: melanoma antigen C;Species: Homo sapiens (man)

melanoma-associated ME20 antigen (me20m) -

R; Maresh, G.A.; Marken, J. 1994
R; Maresh, Biol. 13, 87-95, 1994
A; Title: Cloning and expression of the gene
A; Title: number: 138400; MUID:94235165

for the Melanoma-Associated ME20 Antigen.

A.; Hellstrom, I.; Hellstrom, K.;

A; Status: preliminary; translated from GB/EMBL/DDBJ

C;Date: 01-Nov-1996 #sequence\_revision 01-Nov-1996 #text\_change 01-Dec-2000 C;Accession: I38400; A53668; A55753 C;R;Maresh, G.A.; Marken, J.S.; Neubauer, M.; Aruffo, A.; Hellstrom, I.; Hell:

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A; Molecule type: mRNA
A; Residues: 1-592,594-652 < ADE>
A; Residues: 1-592,594-652 < ADE>
A; Cross-references: GB:S73003; NID:g639589; PIDN:AAC60634.1; PID:g639590
R; Kawakami, Y.; Eliyahu, S.; Delgado, C.H.; Robbins, P.F.; Sakaguchi, K.;
Proc. Natl. Acad. Sci. U.S.A. 91, 6458-6462, 1994
A; Title: Identification of a Munan melanoma antigen recognized by tumor-ir
A; Reference number: A55753; MUID:94294401
A; Accession: A55753
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C;Accession: A41234
R;Kwon, B.S.; Chintamaneni, C.; Kozak, C.A.; Copeland, N.G.; Gilbert, D.J.; Proc. Natl. Acad. Sci. U.S.A. 88, 9228-9232, 1991
                                                                                                                                                                      RESULT
A41234
                                                                                      melanocyte-specific protein Pmel-17 precursor - human
C;Species: Homo sapiens (man)
C;Date: 19-Jun-1992 #sequence_revision 19-Jun-1992 #text_change 30-Sep-1993
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A;Residues: 1-161,'F',163-592,594-662 <KAW>
C;Keywords: glycoprotein
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A; Residues: 1-662 < RES>
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154 KTWGQYWQV 162
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Pmel 17 protein - mouse

C; Species: Mus musculus (house mouse)

C; Date: 27-Oct-1995 #sequence_revision 03-Nov-
C; Accession: S53871

R; Kwon, B.S.; Halaban, R.; Ponnazhagan, S.; Kinucleic Acids Res. 23, 154-158, 1995

A; Title: Mouse silver mutation is caused by a :
A; Reference number: S53871; MUID:95175358

A; Accession: S53871

A; Status: preliminary

A; Status: preliminary
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A; Residues: 1-264 <STO>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C; Accession: H85861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         hypothetical protein 23480 [imported] - Escherichia coli (strain 0157:H7) C;Species: Escherichia coli (C;Species: 16-Feb-2001 #sequence_revision 16-Feb-2001 #text_change 31-Mar-2001 C;Date: 16-Feb-2001 #sequence_revision 16-Feb-2001 #text_change 31-Mar-2001 C;Date: 16-Feb-2001 #sequence_revision 16-Feb-2001 #text_change 31-Mar-2001 C;Date: 16-Feb-2001 #sequence_revision 16-Feb-2001 #text_change 31-Mar-2001 C;Date: 16-Feb-2001 #sequence_revision 16-Feb-2001 #sequence_revision 16-Feb-2001 #sequence_revision 16-Feb-2001 #sequence_revision 16-Feb-2001 #sequence_revision 16-Feb-2001 #sequence_revision 16-Feb-2001 #sequence_revision 16-Feb-2001 #sequence_revision 16-Feb-2001 #sequence_revision 16-Feb-2001 #sequence_revision 16-Feb-2001 #sequence_revision 16-Feb-2001 #sequence_revision 16-Feb-2001 #sequence_revision 16-Feb-2001 #sequence_revision 16-Feb-2001 #sequence_revision 16-Feb-2001 #sequence_revision 16-Feb-2001 #sequence_revision 16-Feb-2001 #sequence_revision 16-Feb-2001 #sequence_revision 16-Feb-2001 #sequence_revision 16-Feb-2001 #sequence_revision 16-Feb-2001 #sequence_revision 16-Feb-2001 #sequence_revision 16-Feb-2001 #sequence_revision 16-Feb-2001 #sequence_revision 16-Feb-2001 #sequence_revision 16-Feb-2001 #sequence_revision 16-Feb-2001 #sequence_revision 16-Feb-2001 #sequence_revision 16-Feb-2001 #sequence_revision 16-Feb-2001 #sequence_revision 16-Feb-2001 #sequence_revision 16-Feb-2001 #sequence_revision 16-Feb-2001 #sequence_revision 16-Feb-2001 #sequence_revision 16-Feb-2001 #sequence_revision 16-Feb-2001 #sequence_revision 16-Feb-2001 #sequence_revision 16-Feb-2001 #sequence_revision 16-Feb-2001 #sequence_revision 16-Feb-2001 #sequence_revision 16-Feb-2001 #sequence_revision 16-Feb-2001 #sequence_revision 16-Feb-2001 #sequence_revision 16-Feb-2001 #sequence_revision 16-Feb-2001 #sequence_revision 16-Feb-2001 #sequence_revision 16-Feb-2001 #sequence_revision 16-Feb-2001 #sequence_revision 16-Feb-2001 #sequence_revision 16-Feb-2001 #sequence_revision 16-Feb-2001 #sequence_revision 16-Feb-2001 #seq
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A;Accession: A41234
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-668 < KWO>
A;Cross-references: GB:M77348
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A; Residues: 1-626 < KWO>
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80; MUID:21074935; PMID:11206551
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; Davis, N.W.; Lim, A.;
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Apodaca,
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A;Map position: 4L

A;Map position: 4L

A;Map position: 4L

C;Superfamily: Saccharomyces protein-tyrosine-phosphatase, nonreceptor type 1;
C;Keywords: phosphorotein; phosphoric monoester hydrolase; tyrosine-specific F;52-303/Domain: protein-tyrosine-phosphatase homology <PTP>
F;252/Active site: Cys (phosphorysteine intermediate) #status predicted F;258/Binding site: substrate phosphate (Arg) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  protein-tyrosine-phosphatase (EC 3.1.3.48), nonrece N.Alternate names: protein D0815; protein YDL230w C;Species: Saccharomyces cerevisiae C;Date: 30-Dec-1991 #sequence_revision 08-Mar-1996 C;Accession: A39862; S67793 R;Guan, K.; Deschenes, R.J.; Qiu, H.; Dixon, J.E. J. Biol. Chem. 266, 12964-12970, 1991 A;Title: Cloning and expression of a yeast protein A;Reference number: A39862; MUID:91302312
                                                                                                                                                                                                                                                                                                                                   R;Blattner, F.R.; Plunkett I
.A.; Rose, D.J.; Mau, B.; Sh
Science 277, 1453-1462, 1997
δÃ
                                                                                                                                                 C; Superfamily:
                                                                                                                                                                                                                                                                                                                                                                                                 hypothetical protein b2226 - Escherichia coli (strain K-12)
c;Species: Escherichia coli
C;Date: 17-Sep-1997 #sequence_revision 17-Sep-1997 #text_change 04-Mar-2000
C;Accession: H64992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Molecule type: DNA
A;Residues: 1-335 <RAS>
A;Cross-references: EMBL:Z74278; NID:g1431387; PIDN:CAA98809.1; PID:g1431388;
A;Experimental source: strain S288C
C;Genetics:
                                                                                                                                                                      A;Cross-references: GB:AE000312; GB:U00096; NID:g1788555; PIDN:AAC75286.1; PID:g17885
A;Experimental source: strain K-12, substrain MG1655
                                                                                                                                                                                                             A;Status: preliminary; nucleic acid sequence not shown; translation A;Molecule type: DNA A;Residues: 1-549 <BLAT>
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A39862
                                                                                                                                                                                                                                                                       A; Reference number: A; Accession: H64992
                                                                                                                                                                                                                                                                                            A;Title: The complete genome sequence of Escherichia coli K-12
A;Reference number: A64720; MUID:97426617
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Gene: SGD:PTP1; MIPS:YDL230w
A;Cross-references: SGD:S0002389;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Reference number: A; Accession: S67793
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        R; Rasmussen, S.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT
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                                            Query Match
Best Local S
Matches 6
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Best Local S
Matches 6
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                                                                                                                                                 coli hypothetical
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                                          Score 45; DB;
; Pred. No. 13;
0; Mismatches
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13;
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MGQYWQ

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A; Gene: cysU; cysT
A; Map position: 52 min
C; Superfamily: maltose transport protein malG
C; Keywords: binding protein-dependent transpor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                N;Alternate names: sulfate transport system permease protein cysT C;Species: Escherichia coli C;Species: Escherichia coli C;Species: 31-Dec-1990 #sequence_revision 31-Dec-1990 #text_change 16-Jul-1999 C;Accession: A35402; G65016; B35403 R;Sirko, A.; Hryniewicz, M.; Hulanicka, D.; Boeck, A. J. Bacteriol. 172, 3351-3357, 1990 A;Title: Sulfate and thiosulfate transport in Escherichia coli K-12: nucleot A;Reference number: A35402; MUID:90264334 A;Accession: A35402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C;Species: Synechocystis sp.
A;Variety: PCC 6803
C;Date: 25-Apr-1997 #sequence_revision 25-Apr-1997 #text_change 20-Jun-2000
C;Accession: S75029
C;Accession: S75029
                                                                                              C; Genetics:
                                                                                                                 A; Molecule type: DNA
A; Residues: 1-126, 'F', 1
C; Comment: This is one
                                                                                                                                                                              A; Status: preliminary; not compared with conceptual
                                                                                                                                                                                                           A; Accession: B35403
                                                                                                                                                                                                                              R;Hryniewicz, M.; Sirko, A.; Palucha, A.; B
J. Bacteriol. 172, 3358-3366, 1990
A;Title: Sulfate and thiosulfate transport
A;Reference number: A35403; MUID:90264335
                                                                                                                                                                                                                                                                                             A;Cross-references: GB:AE000330; GB:U00096; NID:g1788763; PIDN:AAC75477.1; PID:g1788764
A;Experimental source: strain K-12, substrain MG1655
R;Hryniewicz, M.; Sirko, A.; Palucha, A.; Boeck, A.; Hulanicka, D.
                                                                                                                                                                                                                                                                                                                                                                                                        A;Status: preliminary; nucleic acid sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                    Science 277, 1453-1462, 1997
A;Title: The complete genome sequence of Escherichia coli K-12.
A;Reference number: A64720; MUID:97426617
A;Accession: G65016
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Cross-references: GB:M32101; GB:M38050;
A;Experimental source: strain K12
R;Blattner, F.R.; Plunkett III, G.; Bloch,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sulfate/thiosulfate transport protein cysT -
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Molecule type: DNA
A; Residues: 1-209 <KAN>
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                                                                                                                                                                                                                                                                                                                                                                       A; Residues: 1-277 <BLAT>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Residues: 1-277 <SIR>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Title: Sequence analysis of the genome of the unicellular cyanobacterium Synechocystis
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Best Local
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                                                                                                                                         1-126, 'F', 128-133
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6; Conserv
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Shao, Y.
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75.0%;
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                                                                                                                 membrane-associated
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1;
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  transport
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  system;
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                                                                                                                                                                                   translation
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  inner membrane;
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Yamada, M.; Ya
  membrane
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Proc. Natl. Acad. Sci. U.S.A. 94, 5967-5972, 1997
A; Title: Complete nucleotide sequence of the chloroplast genome A; Reference number: 215985; MUID:97303241
A; Accession: T07314
                                                                                                           A; Genome: chloroplast C; Superfamily: cytoch C; Keywords: chloropla
                                                                                                                                                                                                                                                                                                                                                cytochrome c-type synthesis protein homolog - Chlorella vulgaris chloroplast C;Species: chloroplast Chlorella vulgaris
C;Date: 14-May-1999 #sequence_revision 14-May-1999 #text_change 21-Jul-2000
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C;Superfamily: maltose
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                                                                                                                                                                          A;Cross-references:
C;Genetics:
                                                                                                                                                                                                        A; Molecule type: DNA
A; Residues: 1-315 <WAK>
                                                                                                                                                                                                                                                                                                   R; Wakasugi, T.; Nagai, T.; Kapoor, M.; Sugita, Proc. Natl. Acad. Sci. U.S.A. 94, 5967-5972, 1
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                                                                                                                                                      A; Gene: ycf5
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Title: Genome sequence of enterohemorrhagic Escherichia A; Reference number: A85480; MUID:21074935; PMID:11206551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     iller, L.; Grotbeck, E.J.; Davis, Nature 409, 529-533, 2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C; Accession:
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   1 KTWGQYW 7
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                             Score 41; DB Pred. No. 31; 1; Mismatches
                                                                                                                            synthesis
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imalanta, E.;
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A; Title:
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576446

R; Kaneko, T.; Sato, S.; Kotani, H.; Tanaka, A.; Asamizu, E.; Nakamura, Y.; 1

R; Kaneko, T.; Sato, S.; Kotani, H.; Tanaka, A.; Asamizu, E.; Nakamura, Y.; 1
                                o, K.; Okumura, S.; Shimp
DNA Res. 3, 109-136, 1996
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-305 <NIE>
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A;Title: The primary structure of two chlorosome proteins A;Reference number: S43678; MUID:94192803
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A;Experimental source:
C;Genetics:
A;Gene: VC2229
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A;Molecule type: DNA
A;Residues: 1-281 <HEI>
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Nature 406, 477-483, 2000
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C; Superfamily: hyp
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                analysis
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                                             S.; Kotani,
Shimpo, S.;
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                                                 Takeuchi,
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O1; strain N16961; biotype
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              genome of
                                               Tanaka, A.;
euchi, C.; Wa
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lada, T.;
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                                             Nakamura,
ınabe, A.; y
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                                               Yamada,
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1 MJ0279
                                             Y.; Miyajima, N.
Yamada, M.; Yasuda
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C; Superfamily:
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A; Reference number: S743:
A; Accession: S76446
A; Status: preliminary
A; Molecule type: DNA
A; Residues: 1-400 <KAN>
A;Status; processing A;Molecule type: DNA
A;Molecule type: DNA
A;Residues: 1-807 <STO>
A;Cross-references: GB:AE005174;
A;Cross-references: Strain O15
                                                                                                                                             probable outer membrane protein ycds [imported] - Escherichia coli (strain C;Species: Escherichia coli (c;Species: Escherichia coli (c;Date: 16-Feb-2001 #sequence_revision 16-Feb-2001 #text_change 31-Mar-2001 C;Accession: F85647
C;Accession: F85647
C;Accession: F85647
C;Perna, N.T.; Plunkett III, G.; Burland, V.; Mau, B.; Glasner, J.D.; Rose, R;Perna, N.T.; Grotbeck, E.J.; Davis, N.W.; Lim, A.; Dimalanta, E.; Potamousis, Nature 409, 529-533, 2001
                                                                                                                                                                                                                                                                       RESULT
F85647
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C;Species: Escherichia coli
C;Date: 12-Sep-1997 #sequence_revision 17-Sep-1997 #text_change 04-Mar-2000
                                                                                             A; Reference number: A85480; A; Accession: F85647
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A;Experimental source: strain K-12, substrain MG1655
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llarity 100.0%;
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MUID:21074935; PMID:11206551
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               not shown;
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                                                                                                                             coli 0157:H7
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                                                                                                                                                                                                                                                                                                                                                                                                        0;
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                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
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                                                                                                                                                             D.J.; May
K.; Apoda
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1996
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                                                                                                                                                                                                                                                     :H7)
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Escherichia coli ycdS protein

<sup>1</sup>4; NID:g12514389; PIDN:AAG55642.1; GSPDB:GN00145; UWGP: O157:H7, substrain EDL933

Τa

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rucoxanthin chlorophyll a/c-binding light-harvesting protein - N;Alternate names: FCP protein C;Species: Isochrvaia allere
                                                                                                                                                                                                                                                                           A;Status: p.-..
A;Molecule type: DNA
A;Residues: 1-236 <WHI>
A;Cross-references: GB:AE001895;
A;Cross-references: strain R1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C;Species: Isochrysis galbana
C;Date: 19-Mar-1997 #sequence_revision 19-Mar-1997 #text_change 05-Nov-1999
C;Accession: S46301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT
S46301
RESULT
A72451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cytochrome c-type biogenesis protein, heme exporter protein C - Deinococcus radiodurans
C;Species: Deinococcus radiodurans
C;Date: 03-Dec-1999 #sequence_revision 03-Dec-1999 #text_change 17-Mar-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Cross-references: EMBL:X77333; NID:g535080; A;Experimental source: cultivar DUN C;Keywords: light-harvesting complex
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Accession: S46301
A; Molecule type: mRNA
A; Residues: 1-208 <LAR>
                                                                 맑
                                                                                             δÃ
                                                                                                                                                                                                                 A:Map position: 1
C:Superfamily: he
                                                                                                                                                                                                                                                                                                                                                                    A; Reference number: A75250; A; Accession: A75530
                                                                                                                                                                                                                                                                                                                                                                                                                  , M.; Shen, M.; Vamathevan, S.; Smith, H.O.; Venter, J.C Science 286, 1571-1577, 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                    R;White, O.; Eisen, J.A.; Heidelberg, J.F.; Hickey, M.; Shen, M.; Vamathevan, J.J.; Lam, P.; McDonald, S.; Smith, H.O.; Venter, J.C.; Fraser, C.M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Plant Mol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     R;LaRoche, J.; Henry, D.; Wyman, K.; Sukenik, Plant Mol. Biol. 25, 355-368, 1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
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                                                                                                                                                                                                                                                     A; Gene: DR0348
                                                                                                                                                                                                                                                                                                                                                                                                   A; Title: Genome sequence of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Reference number: S46301; MUID:94325461
                                                                                                                               Query Match
Best Local s
Matches 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Accession: A75530
                                                                                                                                                                                                                                                                      Genetics:
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Best Local :
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Best Local
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                                                                                                2 TWGQYW 7
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                                                                 TWGTYW 106
                                                                                                                                   Similarity 5; Conserv
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5; Conserv
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                                                                                                                                   Conservative
                                                                                                                                                                                                                  protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #sequence_revision 03-Dec-1999 #text_change 17-Mar-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                  J.C.; Fraser,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      67.8%;
100.0%
                                                                                                                                                 66.1%;
83.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       66.1%;
83.3%;
                                                                                                                                                                                                                                                                                                                                                                                   the radioresistant MUID:20036896
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                                                                                                                               Score 39; DB : Pred. No. 48; 0; Mismatches
                                                                                                                                                                                                                                                                                                    GB:AE000513; NID:g6458024; PIDN:AAF09930.1; PID:g645803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 40;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 39; DB
Pred. No. 42;
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J. 1.1e+02;
O;
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                                                                                                                                                                                                                                                                                                                                                                                                   bacterium Deinococcus radiodurans
                                                                                                                                                                2;
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                                                                                                                                                                Length 236;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                   L.; Utterback,
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T.; Zalewski,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                   R.J.;
C.; Ma
                                                                                                           expansin - upland cotton (fragment)
C;Species: Gossypium hirsutum (upland cotton)
C;Date: 16-Jul-1999 #sequence_revision 16-Jul-1999
            A;Title: Changes in levels of mRNAs A;Reference number: Z16889; MUID:977 A;Accession: T09871
                                                              R;Shimizu, Y.; Aotsuka, S.; Hasegawa, O.; Kawada, T.; Plant Cell Physiol. 38, 375-378, 1997
                                                                                                                                                                                                                                  뫄
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                                                                                                C; Accession: T09871
                                                                                                                                                                    T09871
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                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
Matches 6
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268 KTWGKYQEV 276

KTWGQYWQV 9

Similarity 66.7 6; Conservative

66.1%; 66.7%;

Score 39; DB Pred. No. 1.56 2; Mismatches

DB 2; 1.5e+02;

Length 794;

0

Gaps

0;

MG185

20

preliminary;

translated from GB/EMBL/DDBJ

of mRNAs for cell MUID:97294938

wall-related

enzymes

in

growing

cotton Hayashi, #text\_change 21-Jul-2000

Sakuno,

T . ;

Sakai, F.;

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DNA Res. 6, 83-101, 1999
A;Title: Complete genome sequence of an aerobic hyper-thermophilic Crenarchaeon, Aero
A:Reference number: A72450; MUID:99310339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           probable lactose transport system permease protein APE2253 - Aeropyrum pernix (strain C;Species: Aeropyrum pernix
C;Date: 20-Aug-1999 #sequence_revision 20-Aug-1999 #text_change 20-Jun-2000
C;Accession: A72451
A; Genetic code: SGC3
C; Superfamily: hypothetical protein
                                                         A; Cross-references: EMBL: AE0000001; GB:U00089; A; Note: the nucleotide sequence was submitted
                                                                                              A; Molecule type: DNA
A; Residues: 1-794 <HIM>
                                                                                                                                                                   R; Himmelreich, R.; Hilbert, H.; Plagens, H.; Pirkl, Nucleic Acids Res. 24, 4420-4449, 1996
A;Title: Complete sequence analysis of the genome of A;Reference number: S73327; MUID:97105885
                                                                                                                                                                                                                                                C;Date: 26-Feb-1997 #sequence_revision 25-Apr-1997
C;Accession: S73328
                                                                                                                                                                                                                                                                                   probable lipoprotein E07_orf794 - W;Alternate names: MG260 homolog E C;Species: Mycoplasma pneumoniae A;Variety: ATCC 29342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C; Superfamily: inner membrane protein
                                     C; Genetics:
                                                                                                                                  A; Status: preliminary; nucleic acid sequence
                                                                                                                                                     A; Reference number: A; Accession: S73328
                                                                                                                                                                                                                                                                                                                                                                                  RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Gene: APE2253
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Experimental source:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Cross-references:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Molecule type: DNA
A; Residues: 1-276 <KAW>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Status: preliminary
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local S
Matches 5
                                                                                                                                                                                                                                                                                                                                                                                                                                       215 RTWGQTWSL 223
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nes 5; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
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                                                       sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  55.6%;
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, S.; Funahashi,
                                                                                                                                                                                                                                                                                                                         MycoplasmaE07_orf794
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                core 39; DB
ced. No. 55;
Mismatches
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ii, T.; Tane
                                                                                                                                  not shown;
                                                                                                                                                                                                                                                                                                                                             pneumoniae
                                                         NID:g1673645;
to the EMBL Da
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Tanaka,
                                                                                                                                                                                         of
                                                                                                                                                                                                                                                                #text_change 07-Dec-1999
                                                                                                                                                                                                                            E.; Li, B.C.; Herrmann,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                         the
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                                                                                                                                  translation not
                                                                                                                                                                                                                                                                                                                                               (strain
                                                                                                                                                                                       bacterium
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T.; Kudoh,
                                                           Data
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      276;
                                                                          PIDN: AAB95650.1;
                                                                                                                                                                                                                                                                                                                                               ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
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                                                                                                                                                                                       Mycoplasma
                                                                                                                                                                                                                                                                                                                                               29342)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Jin-no, K.;
.; Yamazaki,
                                                         November
                                                         PID:g167
mber 1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                       pneumon
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expansin (clone pPtexp2) - loblolly pine (fragment)
(;Species: Pinus taeda (loblolly pine)
(;Species: G-Jul-1999 #sequence_revision 16-Jul-1999 #text_change 26-May-2000
C;Accession: T09818
R;Hutchison, K.W.; Singer, P.B.; Diaz-Sala, C.; Greenwood, M.S.
submitted to the EMBL Data Library, July 1996
A;Description: Expansins are conserved in conifers and expressed in response to exogenou A;Reference number: Z16866
A;Reference number: Z16866
A;Accession: T09818
A;Status: translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-232 < HUTY
                                                                                                                                                                                                                                                                                                                                                                               expansin (clone pPtexp3) - loblolly pine (fragment)
C;Species: Pinus taeda (loblolly pine)
C;Date: 16-Jul-1999 #sequence_revision 16-Jul-1999 #text_change 26-May-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Molecule type: mRNA
A; Residues: 1-160 <SHP.
A; Cross-references: EMBL:D88415; NID:g2244735; PIDN:BAA21109.1;
A; Experimental source: strain Coker312; fiber
C; Superfamily: expansin
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                                                                                                                                                                    A;Cross-references: EMBL:U64891; NID:g1778100; PID:g1778101 A;Experimental source: clone pPtexp3 C;Superfamily: expansin
                                                                                                                                                                                                                                                                                                              R;Hutchison, K.W.; Singer, P.B.; Diaz-Sala, C.; Greenwood, M.S. submitted to the EMBL Data Library, July 1996
A;Description: Expansing are conserved in conifers and expressed in
                                                                                                                                                                                                                                                                                                                                                C; Accession: R; Hutchison,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT
T09818
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A; Residues: 1-232 <HUT>
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A; Accession: T09821
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A;Experimental source: clone pPtexp2; hypocotyl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local S
Matches 5
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Best Local S
Matches 5
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Best Local
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                   182 RNWGQNWQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            182 RNWGQNWQ 189
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                                                                                                                                                                                                                                                                                                                                                                                                                                                           22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 KTWGQYWQ 8
                                                      1 KTWGQYWQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 KTWGQYWQ 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21
                                                                                     Similarity
5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
5; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity 62.5; Conservative
                                                                                                                                                                                                                                                                                                                                                                      T09821
                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                   189
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                                                                                                                                                                                                                                                                                                 Z16866
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             64.4%;
                                                                                                       64.4%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 38; DB Pred. No. 47;
1; Mismatches
                                                                                   Score 38; DB pred. No. 67; 1; Mismatches
                                                                                     1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                               GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DВ
67;
                                                                                                                       2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               <u>ب</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2;
                                                                                     2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2:
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                                                                                                                       Length 232;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 232
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                                                                                     Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PID:g2244736
                                                                                     0;
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                                                                                                                                                                                                                                                                                                                 response to
                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
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                                                                                     0;
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                                                                                                                                                                                                                                                                                                                 exogeno
C; Genetics:
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RESULT

23

EXP1

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expansin EXP1 [imported] - Arabidopsis thaliana (fragment)
C;Species: Arabidopsis thaliana (mouse-ear cress)
C;Date: 21-Jul-2000 #sequence_revision 21-Jul-2000 #text_c
                                                                                                                                                                                                                                                                    RESULT
T50654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           expansin (clone pPtexp4) - loblolly pine (fragment)
(;Species: Pinus taeda (loblolly pine)
C;Date: 16-Jul-1999 #sequence_revision 16-Jul-1999 #text_change 26-May-2000
C;Accession: T09825
R;Hutchison, K.W.; Singer, P.B.; Diaz-Sala, C.; Greenwood, M.S.
submitted to the EMBL Data Library, July 1996
A;Bescription: Expansins are conserved in conifers and expressed in response A;Beference number: Z16866
A;Accession: T09825
                                                                             C;Accession: T50654
R;Shcherban, T.Y.; Shi, J.; Durachko, D.M.; Guiltine Proc. Natl. Acad. Sci. U.S.A. 92, 9245-9249, 1995
A;Title: Molecular cloning and sequence analysis of A;Reference number: Z14894; MUID:96016146
A;Accession: T50654
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T09826
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                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
Thehes 5; Conserve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Experimental source: clone pPtexp5 C; Superfamily: expansin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Status: preliminary; translated from GB/EMBL/DDBJA;Molecule type: mRNAA;Residues: 1-232 <HUT>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      R;Hutchison, K.W.; Singer, P.B.; Diaz-Sala, C.; Greenwood, M.S. submitted to the EMBL Data Library, July 1996
A;Description: Expansins are conserved in conifers and expresse A;Reference number: Z16866
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    expansin (clone pPtexp5) - loblolly pine (fragment)
C;Species: Pinus taeda (loblolly pine)
C;Date: 16-Jul-1999 #sequence_revision 16-Jul-1999 #text_change 26-May-2000
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A; Cross-references:
                   A; Molecule type: mRNA
A; Residues: 1-237 <SHC>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Reference number: A; Accession: T09826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-332 GHUT>
A;Cross-references: EMBL:U64892; NID:g1778102; PID:g1778103
                                                          A; Status: preliminary; translated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Cross-references: EMBL:U64893; NID:g1778104; PID:g1778105
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Best Local Similarity 62.
Matches 5; Conservative
                                                                                                                                                                                                                                                                                                                                                     182 RNWGQNWQ 189
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EMBL: U30476; PIDN: AAB38070.1
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62.5%;
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62.5%;
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Pred.
                                                            from GB/EMBL/DDBJ
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                                                                                                                                                            Guiltinan,
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67;
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67;
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                                                                                                                                                                 M.J.; McQueen-Mason,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
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                                                                                                                        highly conserved,
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                                                                                                                                                                 S.J.;
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197 RNWGQNWQ

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C:Species: Oryza sativa (rice)
C:Date: 23-Apr-1999 #sequence_revision 23-Apr-1999 #text_change
C:Accession: T04175
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                 δõ
                                                                                                                                 A; Map position: 2
C; Superfamily: expansin
                                                                                                                                                                                                                                                                       A;Title: Sequence and analysis of chromosome 2 of A;Reference number: A84420; MUID:20083487 A;Accession: C84444
                                                                                                                                                                                                                                                                                                                          R;Lin, X; Kaul, S; Rounsley, S.D.; Shea, T.P.; Benito, M.I.; Town, C.D.; Fujii, C.Y. M.; Koo, H.; Moffat, K.S.; Cronin, L.A.; Shen, M.; VanAken, S.E.; Umayam, L.; Tallon, euss, D.; Nierman, W.C.; White, O.; Eisen, J.A.; Salzberg, S.L.; Fraser, C.M.; Venter, Nature 402, 761-768, 1999
                                                                                                                                                                                                                                                                                                                                                                                          probable expansin [imported] - Arabidopsis thaliana
C;Species: Arabidopsis thaliana (mouse-ear cress)
C;Date: 02-Feb-2001 #sequence_revision 02-Feb-2001 #text_change 16-Feb-2001
C;Accession: C84444
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C;Superfamily: expansin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       R;Cho, H.T.; Kende, H.
Plant Cell 9, 1661-1671, 1997
Plant Cell 9, 1661-1671, 1997
A;Ttle: Expression of expansin genes is correlated
A;Reference number: 215042; MUID:97480100
A;Accession: T04175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               expansin - rice
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                                                                                                                                                                       A; Gene: At2g03090
                                                                                                                                                                                       C; Genetics
                                                                                                                                                                                                       A; Cross-references:
                                                                                                                                                                                                                         A; Molecule type: DNA
A; Residues: 1-248 <STO>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Cross-references: EMBL:U85246; NID:g1815680; PIDN:AAB81662.1; PID:g1815681
A;Experimental source: cv. Pin Gaew 56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Molecule type: mRNA
A; Residues: 1-246 <CHO>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Status: preliminary; translated
                                                                                                                                                                                                                                                            A;Status:
                                                                    Query Match
Best Local
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Best Local
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Best Local
                                                      Matches
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   KTWGQYWQ 8
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                                                     Similarity
5; Conser
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                                                      Conservative
                                                                                                                                                                                                         GB:AE002093;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  64.48;
                                                                    64.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   64.4%;
                                                   Pred. No. 71;
1; Mismatches
                                                                                                                                                                                                       NID: g3461833; PIDN: AAC32927.1; GSPDB: GN00139
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Pred.
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68;
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probable expansin [imported] - Arabidopsis thallana
C;Species: Arabidopsis thaliana (mouse-ear cress)
C;Date: 02-Feb-2001 #sequence_revision 02-Feb-2001
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                                                      F84831
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#text\_change 16-Feb-2001

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R;Shcherban, T.Y.; Shi, J.; Durachko, D.M.; Guiltinan, M.J.; McQueen-Mason, S.J.; Proc. Natl. Acad. Sci. U.S.A. 92, 9245-9249, 1995
A;Title: Molecular cloning and sequence analysis of expansins--a highly conserved, A;Reference number: Z14894; MUID:96016146
A;Accession: T03298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         expansin 2 - rice
C;Species: Oryza sativa (rice)
C;Date: 24-Mar-1999 #sequence_revision 24-Mar-1999 #text_change 21-Jul-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     R;Shcherban, T.Y.; Shi, J.; Durachko, D.M.; Guiltinan, M.J.; McQueen-Mason, S.J.; Shi proc. Natl. Acad. Sci. U.S.A. 92, 9245-9249, 1995
A;Title: Molecular cloning and sequence analysis of expansins—a highly conserved, mu A;Reference number: Z14894; MUID:96016146
A;Accession: T10079
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  expansin S1 precursor - C; Species: Cucumis sativ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Description: mediates cell wall exten
C;Superfamily: expansin
F;1-23/Domain: signal sequence #status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Cross-references: EMBL:U30382; NID:g1040874; PIDN:AAB37746.1; A;Experimental source: cultivar Burpee Pickler
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C;Date: 16-Jul-1999 #sequence_revision 16-Jul-1999 #text_change 21-Jul-2000 C;Accession: T10079
                                                                                                                                                                                   A; Description: induces of C; Superfamily: expansin
                                                                                                                                                                                                                              C; Function:
                                                                                                                                                                                                                                                  A; Gene: EXP2
                                                                                                                                                                                                                                                                       C; Genetics:
                                                                                                                                                                                                                                                                                                          A; Molecule type: mRNA
A; Residues: 1-251 <SHC>
                                                                                                                                                                                                                                                                                                                                                   A; Status: preliminary;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      F;24-250/Product: expansin #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C; Function:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Gene: EXP1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Molecule type: mRNA
A; Residues: 1-250 <SHC>
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                                                                                                                                                                                                                                                                                      A; Cross-references: EMBL: U30477;
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Matches 5; Conserv
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Best Local
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                                         1 KTWGQYWQ
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5; Conser
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                                                                                                                                                                                                                                                                                                                                                 translated
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                                                                                                 64.4%;
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62.5%;
                                                                                                                                                                                                        (creep) in
                                                                                                                                                                                                                                                                                      NID:g1041709; PIDN:AAB38074.1; PID:g1041710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1;
                                                                                                   Score 38; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 38;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                   from GB/EMBL/DDBJ
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Mismatches
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C;Accession: F84831
R;Lin, X.; Kaul, S.; Rounsley, S.D.; Shea, T.P.; Benito, M.I.; Town, C.D.; Fujii, C.Y.; M.; KOO, H.; Moffat, K.S.; Cronin, L.A.; Shen, M.; Vanaken, S.E.; Umayam, L.; Tallon, L. euss, D.; Nierman, W.C.; White, O.; Eisen, J.A.; Salzberg, S.L.; Fraser, C.M.; Venter, J. Nature 402, 761-768, 1999
A;Title: Sequence and analysis of chromosome 2 of the plant Arabidopsis thaliana. A:Reference number: A84420; MUID:20083487
A;Recession: F84831
A;Status: preliminary
A;Kolecule type: DNA
A:Residues: 1-253 *CSTO>
A;Cross-references: GB:AE002093; NID:92651297; PIDN:AAB87577.1; GSPDB:GN00139
C;Genetics:
A;Gene: At2940610
A:Map position: 2
C;Superfamily: expansin
Query Match
Best Local Similarity 62.5%; Pred. No. 72;
Matches 5; Conservative 1; Mismatches 2; Indels 0; Gaps 0;
Oy 1 KTWGQYWQ 8
Ill | | |
Db 203 RNWGQNWQ 210
Search completed: July 3, 2001, 10:23:12
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Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB seq length: 0
DB seq length: 2000000000
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1: /cgn2_6/ptodata/2/iaa/5A_COMB.pep:*

2: /cgn2_6/ptodata/2/iaa/5B_COMB.pep:*

3: /cgn2_6/ptodata/2/iaa/6A_COMB.pep:*

4: /cgn2_6/ptodata/2/iaa/FCTUS_COMB.pep:*

5: /cgn2_6/ptodata/2/iaa/PCTUS_COMB.pep:*

6: /cgn2_6/ptodata/2/iaa/backfiles1.pep:*
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US-08-787-547-61
US-08-417-1174-46
US-08-902-516-29
US-09-036-582-26
US-08-417-1174-12
US-08-417-1174-27
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US-08-787-547-61
Query Match
Best Local Similarity
Matches 9; Conserv
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                                                                                                                                                                                                                           TOPOLOGY:
100.0%; ; ilarity 100.0%; ; Conservative 0;
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Result

No.

38 64.4 20 1 US-08-390-156A-40 38 64.4 20 1 US-08-390-1156A-43 38 64.4 20 1 US-08-439-817-71 38 64.4 20 1 US-08-439-817-71 38 64.4 20 1 US-08-485-508-85 38 64.4 20 1 US-08-485-508-85 38 64.4 72 1 US-08-485-508-86 38 64.4 72 1 US-08-485-508-6 38 64.4 72 1 US-08-485-508-6 38 64.4 72 1 US-08-485-508-6 38 64.4 167 2 US-08-485-539-4 38 64.4 179 2 US-08-845-539-6 38 64.4 225 2 US-08-440-517A-3 38 64.4 225 2 US-08-440-517A-5 38 64.4 225 2 US-08-440-517A-5 38 64.4 226 2 US-08-440-517A-5 38 64.4 226 2 US-08-440-517A-5 38 64.4 226 2 US-08-440-517A-5 38 64.4 226 2 US-08-440-517A-5 38 64.4 226 2 US-08-440-517A-5 38 64.4 226 2 US-08-440-517A-5 38 64.4 226 2 US-08-440-517A-5 38 64.4 226 2 US-08-440-517A-5
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US-08-390-156A-40 US-08-390-156A-43 US-08-439-817-65 US-08-489-817-71 US-08-485-508-85 US-08-485-508-85 US-08-486-036A-6 PCT-US96-036A-6 US-08-445-539-6 US-08-440-517A-3 US-08-440-517A-5 US-08-440-517A-5 US-08-440-517A-6 US-08-440-517A-6 US-08-440-517A-6 US-08-440-517A-6 US-08-440-517A-6 US-08-440-517A-6 US-08-440-517A-6 US-08-440-517A-6 US-08-440-517A-6

Title:

on

## ALIGNMENTS

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; MOLECULE TYPE: peptide US-08-787-547-61
                                                                                                                                                                                                                                             OPERATING SYSTEM: Windows95
SOFTWARE: FRASLESD for Windows Version 2.
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/787,547
FILING DATE: 22-JAN-1997
CLASSIFICATION DATA:
APPLICATION NUMBER:
APPLICATION NUMBER:
APPLICATION NUMBER:
APPLICATION NUMBER:
APPLICATION APPLICATION:
APPLICATION NUMBER:
APPLICATION NUMBER:
ATTORNEY/AGENT INFORMATION:
NAME: Fraser, Janis K.
REGISTRATION NUMBER: 34,819
REGISTRATION NUMBER: 34,819
                                                          TELEX: 200154
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 9 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Hedley, Mary Lynne APPLICANT: Curley, Joanne M. APPLICANT: Langer, Robert S. TITLE OF INVENTION: MICROPARTI TITLE OF INVENTION: OF NUCLEIC NUMBER OF SEQUENCES: 107 CORRESPONDENCE ADDRESS:
                                                                                                                                                   REGISTRATION NUMBER: 34,819
REFERENCE/DOCKET NUMBER: 081
TELECOMMUNICATION INFORMATION:
TELEPHONE: 617-542-5070
TELEFAX: 617-542-8906
TELEY DOONER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                              TELEFAX: o...
TELEFAX: 200154
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STATE: MA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER: IBM CON
OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY: US
ZIP: 02110-2804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE: Fish & Richardson, P.C. STREET: 225 Franklin Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             , 61, APE
783567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INFORMATION:
                                                        amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Application US/08787547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hedley, Mary Lynne
                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MICROPARTICLES FOR DELIVERY
OF NUCLEIC ACID
                                                                                                                                                                                                                                08191/003001
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Score 59; DB 1; Length 9; Pred. No. 1.4e+05; Indels

0,

Gaps

B 8

KTWGQYWQV 9
KTWGQYWQV 9

US-08-417-174-46

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RESULT 3
US-08-902-516-29
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                                                                                                                                                                                                                                                                                                                                                                    ; TOPOLOGY: Un ; MOLECULE TYPE: US-08-417-174-46
                                                                                                      Sequence 29, Application US/08902516 Patent No. 5891432
                                                                                                                                                                                                                                                                                                  Query Match
Best Local !
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                                                                                                                                                                                                                                                                                  Matches
                                                                     GENERAL INFORMATION: APPLICANT: SOO HO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEX: 421792
INFORMATION FOR SEQ ID NO: 46:
APPLICANT: SOO HOO, I
TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION:
NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US/08
FILING DATE: 22-APR-1994
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION: MELANOMA ANTIGENS & TITLE OF INVENTION: THEIR USE IN DIAGNOTITLE OF INVENTION: METHODS NUMBER OF SEQUENCES: 126

CORRESPONDENCE ADDRESS:
ADDRESSE: MORGAN & FINNEGAN, L.L.P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 20:
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
TELEFAX: (212) 751-6849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CURRENT AFFELD.

PAPPLICATION NUMBER: US/U8/41/,...

FILING DATE: 05-APR-1995

PRIOR APPLICATION DATA:

PRIOR APPLICATION NUMBER: US/08/231,565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE CHARACTERISTICS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDIUM TYPE: FLOPPY DISK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                              Local Similarity hes 9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: amino acid
STRANDEDNESS: Unl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: ASCII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OPERATING SYSTEM: PC-DOS/MS-DOS
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                                                                                                                                                                                                                                              1 KTWGQYWQV 9
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                                                                                                                                                                                                                                                                                  Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                        Unknown
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                                                                                                                                                                                                                                                                                                                                                                                      Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                        Unknown
                                                                                                                                                                                                                                                                                                  100.0%;
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THEIR USE IN DIAGNOSTIC AND THERAPEUTIC
 MEMBRANE-BOUND CYTOKINE COMPOSITIONS COMPRISING GM-CSF AND METHODS OF MODULATING AN IMMUNE RESPONSE USING SAME 50
                                                                       William
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2026-4124US1
                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                  Score 59; DB 2;
Pred. No. 1.4e+05;
                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                0,
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RESULT 5
US-08-417-174-47
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Best Local Similarity
****hes 9; Conserve
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US-09-036-582-26
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-036-582-26
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Best Local Similarity
""" hes 9; Conserve
                                                                                                                                                                                                                                                                                    CURRENT APPLICATION NUMBER: US/09/036,582A
CURRENT FILING DATE: 1998-03-06
NUMBER OF SEQ ID NOS: 39
SOFTWARE: PATENTIN VET. 2.0
SEQ ID NO 26
                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:

APPLICANT: van der Bruggen, Pierre
APPLICANT: Cornelis, Guy R.

TITLE OF INVENTION: DELIVERY OF PROTEINS INTO EUKARYOTIC CELLS
TITLE OF INVENTION: WITH RECOMBINANT YERSINIA
FILE REFERENCE: 11154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 26, Application US/09036582A Patent No. 5965381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX: (619)535-8949
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 9 amino acids
                                                                                                                                                                                                                                                      LENGTH: 9
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATTORNEY/AGENT INFORMATION:
NAME: Campbell, Cathryn A.
REGISTRATION NUMBER: 31,815
REFERENCE/DOCKET NUMBER: P-IM 2442
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CURRENT APPLICATION DATA:
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ADDRESSEE: CAMPBELL & FLORES, LLP
STREET: 4370 La Jolla Village Drive,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELECOMMUNICATION INFORMATION: TELEPHONE: (619)535-9001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: FILING DATE: 29-JUI CLASSIFICATION: 424
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OPERATING SYSTEM: PC-DOS/MS-DOS
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CITY: San Diego
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                                                                                                                                  Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%;
                                                                                                                                                   100.0%; Score 59; DB 2; 100.0%; Pred. No. 1.4e+05;
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US-08-417-174-121
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                                                                                                                                                                                                         Sequence 121, Application US/08417174 Patent No. 5844075
                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US/08/231
FILING DATE: 22-APR-1994
CLASSIFICATION: 435
ATTORNEY_AGENT INFORMATION:
NAME: CAROL M. GRUPPI
REGISTRATION NUMBER: 37,341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
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TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
TELEPAX: (212) 751-6849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/417,174
FILING DATE: 05-APR-1995
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE CHARACTERISTICS:
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MEDIUM TYPE: FLOPPY DISK
                                                                                                  TITLE OF INVENTION: MELANOM.
TITLE OF INVENTION: THEIR US
TITLE OF INVENTION: METHODS
                                                                     CORRESPONDENCE ADDRESS:
                                                                                                                                                         APPLICANT:
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                                                                                       NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FITLE OF INVENTION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: amino acid
STRANDEDNESS: Unk
TOPOLOGY: Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY: USA
ZIP: 10154
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CITY: NEW YORK
STATE: NEW YORK
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADDRESSEE:
                                                     ADDRESSEE:
                                                                                                                                                                                                                                                                                                               1 KTWGQYWQV 9
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NEW YORK
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                                   345 PARK AVENUE
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                                                                                                                                                      KAWAKAMI, YUTAKA; ROSENBERG, STEVEN A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STEVEN A.
                                                                                                                                                                                                                                                                                                                                                                                   Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IBM PC COMPATIBLE
SYSTEM: PC-DOS/MS-DOS
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                                                  MORGAN & FINNEGAN, L.L.P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unknown
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                                                                                                                    MELANOMA ANTIGENS AND
THEIR USE IN DIAGNOSTIC AND THERAPEUTIC
                                                                                                                                                                                                                                                                                                                                                                                                 100.0%; Score 59; 100.0%; Pred. No.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US/08/231,565
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                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
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STRANDEDNESS:
TOPOLOGY: Unk:
MOLECULE TYPE:
US-08-417-174-121
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Best Local Similarity
Prohes 9; Conserve
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 6, Application US/07891942G Patent No. 5679511 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 20
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
                                                                 APPLICATION NUMBER: 06/915,753
FILING DATE: 06-OCT-1986
PRIOR APPLICATION DATA:
                                                                                                                                                                                          COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
CURRENT APPLICATION DATA:
                 APPLICATION NUMBER: 07/3 FILING DATE: 07-JUN-1989 ATTORNEY/AGENT INFORMATION:
                                                                                                                           CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Kwon, Byoung Se
TITLE OF INVENTION: CDNA CLONES FOR HUMAN TYROSINASE AND FOR
TITLE OF INVENTION: A REGULATORY PROTEIN IN THE MELANIN PROT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE CHARACTERISTICS:
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FILING DATE: 05-APR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/231,565
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MEDIUM TYPE: FLOPPY DISK
                                                                                                                                                                                                                                                                                                                                                                                                                                               CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         154 KTWGQYWQV 162
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OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                               APPLICATION NUMBER: FILING DATE: 01-JU
                                                                                                                                                                                                                                                                                                                  COUNTRY: U. ZIP: 14850
                                                                                                                                                                                                                                                                                                                                                                    STREET: 306 | CITY: Ithaca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEFAX: (212) 751-6849
TELEX: 421792
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                                                                                                                                                                                                                                                                                                                                   USA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (212) 758-4800
                                                                                                                                                                 01-JUN-1992
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Christopher A
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                                                    07/362,847
                                                                                                                                                                                   US/07/891,942G
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                                                                                                                                                                                                                       Version #1.30
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REGISTRATION NUMBER: 34

34,390

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                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 27, Application US/08417174
Patent No. 5844075
GENERAL INFORMATION:
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Best Local
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CORRESPONDENCE ADDRESS:
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APPLICATION NUMBER: US/08/417,174
FILING DATE: 05-APR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/231,565
FILING DATE: 22-APR-1994
                                                                                     OPERATING SYSTEM: PC-D
SOFTWARE: ASCII
CURRENT APPLICATION DATA:
                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: KAWAKAMI, YUTAKA; ROSENBERG, APPLICANT: STEVEN A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          154 KTWGQYWQV 162
                                                                                                                                                                                                 COUNTRY: US
ZIP: 10154
                                                                                                                                               COMPUTER:
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les 9; Conservative
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                                                                                                                                                                                                                                                   CITY: NEW YORK
                                                                                                                                                                                                                                                                     STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS: Kwon, Byoung Se
AUTHORS: Chintamaneni, Cl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: amino acid
STRANDEDNESS: sir
                                                                                                                                                                                                                                                                                  ADDRESSEE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS:
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                                                                                                                                                                                                                NEW YORK
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A melanocyte-specific gene, Pmel 17, maps near the silver coat color locus on mouse chromosome 10 and is in a syntenic region on human chromosome 12 .: Proc. Natl. Acad. Sci. U.S.A.
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Copeland, Neal G
Gilbert, Debra J
Jenkins, Nancy
Barton, David
                                                                                                                                                                                                                                                                     345 PARK AVENUE
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Kim, Kack K
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                                                                                                                      IBM PC COMPATIBLE
SYSTEM: PC-DOS/MS-DOS
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100.0%; Pred. No. 0.098;
tive 0; Mismatches
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Best Local Similarity
Thes 8; Conserve
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 2
Patent No.
                                                                                                                APPLICATION NUMBER: US/08/231
PILING DATE: 22-APR-1994
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 2026
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
TELEPHONE: (212) 751-6849
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INFORMATION FOR SEQ ID NO:
                                                                         INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                      SOFTWARE: ASCII
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
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REFERENCE/DOCKET NUMBER: 20
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
TOPOLOGY: UI
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TITLE OF INVENTION:
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NAME: CAROL M. GRUPPI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQUENCES:
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                         STRANDEDNESS:
                                              TYPE:
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STRANDEDNESS: Unknown
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                                                         LENGTH:
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o. 5874560
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                                                                                                                                                                                                                                                                                                                       IBM PC COMPATIBLE
                                                                                                                                                                                                                                                                                                                                                                                                                                            MORGAN & FINNEGAN
                            Unknown
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THEIR USE IN DIAGNOSTIC AND THERAPEUTIC
METHODS
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0.39;
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RESULT 11
US-08-417-174-71
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; MOLECULE TYPE:
US-09-007-961-27
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; Sequence 27, Application US/09007961
; Patent No. 5994523
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Best Local Similarity
""+"hes 8; Conserv?
           Sequence 71, Application US/08417174
Patent No. 5844075
GENERAL INFORMATION:
APPLICANT: KAWAKAMI, YUTAKA; ROS
                                                                                                                                                                                       Matches
                                                                                                                                                                                                 Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/231,56
FILING DATE: 22-APR-1994
ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 2026
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
                                                                                                                                                                                                                                                                                                                                                         TELEFAX: (212) 751-68-
TELEX: 421792
INFORMATION FOR SEQ ID NO:
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MEDIUM TYPE: FLOPPY DISK
COMPUTER: HAM PC COMPOTELE
COMPUTER: HAM PC COMPOTENT HAM
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE: ASCII
CURRENT APPLICATION DATA:
 APPLICANT:
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TITLE OF INVENTION:
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                                                                                                                          |||||||||
| 154 KTWGQYWQ 161
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                                                                                                                                                                                                                                                                                                 TYPE: amino acid
STRANDEDNESS: Unl
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
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                                                                                                                                                        1 KTWGQYWQ 8
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KAWAKAMI,
STEVEN A.
                                                                                                                                                                                                                                                                                                                                                                                  (212) 751-6849
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                                                                                                                                                                                    Conservative
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                                                                                                                                                                                                 93.2%; Score 55; 100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MELANOMA ANTIGENS AND
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              YUTAKA; ROSENBERG
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0.39;
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; TYPE: amino acid
; STRANDEDNESS: Unkn
; TOPOLOGY: Unknown
; MOLECULE TYPE: Pepti
US-08-417-174-71
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Best Local Similarity
Whiches 8; Conserve
                                                                                                                                                                                                                                                                                                                                                        US-08-417-174-72
                                                                                                                                                                                                                                                                                                                                                                      RESULT
                                                                                                                                                                                                                                                                                                   Patent No. 5844075
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                    APPLICANT: KAWAKAMI,
APPLICANT: STEVEN A.
TITLE OF INVENTION:
TITLE OF INVENTION:
                                              COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 20
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
TELEPAX: (212) 751-6849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OPERATING SYSTEM: PC-D
SOFTWARE: ASCII
CURRENT APPLICATION DATA:
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MEDIUM TYPE: FLOPPY DISK
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TITLE OF INVENTION:
                                                                                                                                                                                    NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                   TITLE OF INVENTION: THEIR USE IN DIAGNOSTIC AND THERAPEUTIC TITLE OF INVENTION: METHODS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US/08
FILING DATE: 22-APR-1994
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
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ADDRESSEE: MORGAN & FINNEGAN, L.L.P.
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TELEFAX: 1-
TEX: 421792
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COMPUTER: IBM PC COMPATIBLE OPERATING SYSTEM: PC-DOS/MS-SOFTWARE: ASCII
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STATE: NEW YORK
                                                                                               COUNTRY:
                                                                                                                                                   STREET:
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                                                                                                                                                                    ADDRESSEE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY:
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                                                                                                                                                                                                                                                                                                                      72, Application US/08417174
o. 5844075
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                                                                                    10154
                                                                                                                                     T: 345 PARK AVENUE
NEW YORK
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                                                                                                                    NEW YORK
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                                                                                                    USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ilarity 100.0%;
Conservative
                                                                                                                                                                                                                                                                  STEVEN A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IBM PC COMPATIBLE
                                                                                                                                                                  MORGAN & FINNEGAN, L.L.P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unknown
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                                                                                                                                                                                                                                                      MELANOMA ANTIGENS AND
                 PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       91.5%; Score 54; DB
100.0%; Pred. No. 1.
ive 0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1.4e+05;
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US-08-417-174-73
US-08-417-174-73
; Sequence 73, Application US/08417174
: Patent No. 5844075
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US-08-417-174-72
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ZIP: 10154

ZIP: 10154

COMPUTER READABLE FORM:

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Best Local :
                                                                                                                                                                                                                                  APPLICATION NUMBER: US/08/417,174
FILING DATE: 05-APR.1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/231,565
FILING DATE: 22-APR.1994
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
          INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
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CLASTICATION: 455
ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
NAME: CAROL M. GRUPPI
20
                                                                                                                                       REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 20
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OPERATION OF ASCII
SOFTWARE: ASCII
CURRENT APPLICATION DATA:
US/08/417,174
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REFERENCE/DOCKET NUMBER: 20
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
TELEPAX: (212) 751-6849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 05-APR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/231,565
FILING DATE: 22-APR-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQUENCES: 126
CORRESPONDENCE ADDRESS:
ADDRESSEE: MORGAN & FINNEGAN, L.L.P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE CHARACTERISTICS:
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TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: KAWAKAMI, YUTAKA; ROSENBERG, APPLICANT: STEVEN A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION DATA:
                     TELEFAX: (221792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity 100 les 8; Conservative
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STRANDEDNESS: Unk
TOPOLOGY: Unknown
                                                                                                  TELEPHONE:
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FOR SEQ ID NO:
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                                                                     (212) 751-6849
                                                                                                          (212) 758-4800
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100.0%; Pr
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   73:
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B; Pred. No. 1.4
O; Mismatches
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                 Query Match
Best Local Similarity
Thes 8; Conserve
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 74, Application US/08417174 Patent No. 5844075
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 91.5%; Score 54; DB 2; Best Local Similarity 100.0%; Pred. No. 1.4e+ Matches 8; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                          OPERATING SYSTEM: PC-DOS/M
SOFTWARE: ASCII
CURRENT APPLICATION DATA:
APPLICATION UNMBER: US/08/
FILING DATE: 05-APR-195
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                               INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                        TELECOMMUNICATION INFORMATION: TELEPHONE: (212) 758-4800 TELEFAX: (212) 751-6849
                                                                                                                                                                                               SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                     ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: FILING DATE: 22-API CLASSIFICATION: 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CITY: NEW YORK
STATE: NEW YORK
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRANDEDNESS:
TOPOLOGY: Un
                                                                                                                                       TOPOLOGY:
                                                                                                                                                   STRANDEDNESS:
                                                                                                                                                                                                                                                                                                         REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                         REFERENCE/DOCKET NUMBER:
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 2 TWGQYWQV 9
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345 PARK AVENUE
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                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KAWAKAMI, YUTAKA; ROSENBERG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unknown
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)N: 435
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                                                                                                                                                   Unknown
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                                            91.5%;
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126
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THEIR USE IN DIAGNOSTIC AND THERAPEUTIC
                                                                                                                                                                                                                                                                                                                                                                               US/08/231,565
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                                                                                                                                                                                                                                                                                                    37,341
                                            Score 54; DB 2;
Pred. No. 1.4e+(
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                                             1.4e+05;
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                                                           Length 9;
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US-08-417-174-75
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Sequence 75, APF--
Sequence 75, APF--
No. 5844075
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Best Local Similarity
Matches 8; Conserv
                                                                                                                                                                           Sequence 68, Application US/08417174
Patent No. 5844075
                                                                                                                                                              GENERAL INFORMATION:
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                        APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US/08/417,174
FILING DATE: 05-APR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/231,565
FILING DATE: 22-APR-1994
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELECOMMUNICATION INFORMATION: TELEPHONE: (212) 758-4800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQUENCES: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                    APPLICANT: STEVEN A.
TITLE OF INVENTION: MELANOMA ANTIGENS AND
TITLE OF INVENTION: THEIR USE IN DIAGNOSTIC AND THERAPEUTIC
TITLE OF INVENTION: METHODS
CORRESPONDENCE ADDRESS:
ADDRESSEE: MORGAN & FINNEGAN, L.L.P.
STREET: 345 PARK AVENUE
                                                       NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: amino acid
STRANDEDNESS: Unknown
TOPOLOGY: Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER: IBM PC COMPATIBLE OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                        2 TWGQYWQV 9
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2 TWGQYWQV 9
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                                                                                                                                                                                                                                                                                                                                                               91.5%; Score 54; DB 2; illarity 100.0%; Pred. No. 1.4e+05 Conservative 0; Mismatches 0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (212) 751-6849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KAWAKAMI, YUTAKA; ROSENBERG
                                                                                                                                           KAWAKAMI, YUTAKA; ROSENBERG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MORGAN & FINNEGAN, L.L.P
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                                                       126
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Best Local Similarity
Matches 8; Conserv
                                                                                                                                                                                                                                                                                                                                                                        Patent No.
                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
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TELEX: 421792
INFORMATION FOR SEQ ID NO:
APPLICATION NUMBER: US/08, FILING DATE: 05-APR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08, FILING DATE: 22-APR-1994
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                APPLICANT: KAWAKAMI
APPLICANT: STEVEN A
TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: US/08/417,174
FILING DATE: 05-APR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/231,565
FILING DATE: 22-APR-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 22-APR-1994
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
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MEDIUM TYPE: FLOPPY DISK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: ASCII
CURRENT APPLICATION DATA:
                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
COMPUTER: LEM PC COMPATIBLE
COMPATING SYSTEM: PC-DOS/MS-DOS
                                                                                 SOFTWARE: ASCII
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE CHARACTERISTICS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MOLECULE TYPE:
                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                      TITLE OF INVENTION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CITY: NEW YORK
STATE: NEW YORK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: amino acid
STRANDEDNESS: Unkr
TOPOLOGY: Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OPERATING SYSTEM: PC-DOS/MS-DOS
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                                                                                                                                                                                 COUNTRY:
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5. 5844075
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                                                                                                                                                                                                                NEW YORK
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CAROL M. GRUPPI
20
                                                                                                                                                                                                  NEW YORK
                                                                                                                                                                                                                               E: MORGAN & FINNEGAN, L.L.P.
345 PARK AVENUE
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                                                                                                                                                                                                                                                                                                                               STEVEN A.
                                                                                                                                                                                                                                                                                                                                           KAWAKAMI, YUTAKA; ROSENBERG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Peptide
                                                          UMBER: US/08/417,174
05-APR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    89.8%;
                                                                                                                                                                                                                                                                                       METHODS
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THERAPEUTIC
                               US/08/231,565
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Pred. No. 1.4e+05;
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                             Seg No 68
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wo/05/29193
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; MOLECULE TYPE: US-08-417-174-70
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US-08-417-174-70
Sequence 70, Application US/08417174
Patent No. 5844075
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; STRANDEDMESS: Unknown
; TOPOLOGY: Unknown
; MOLECULE TYPE: Peptide
US-08-417-174-69
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Best Local Similarity
                                                                                            TELEX: 421792
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
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NAME: CAROL M. GRUPPI
REGISTRATION UNMBER: 37,341
REFERENCE/DOCKET NUMBER: 2026
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
TELEPHONE: (212) 751-6849
                                                                                                                                                         CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 2026-4124US1
TELEPHONE: (212) 758-4800
                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US/08/417,174 FILING DATE: 05-APR-1995 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: MELANOMA ANTIGENS AND
TITLE OF INVENTION: METHODS
TITLE OF INVENTION: METHODS
                                                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                                                                                 TELEPHONE: (212) 751-6849
                                STRANDEDNESS:
TOPOLOGY: Un
                                                                                                                                                                                                                                                            APPLICATION NUMBER: US/08/231,565
FILING DATE: 22-APR-1994
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE:
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                                                               amino acid
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                                Unknown
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                                            Unknown
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RESULT 20
US-08-417-174-77
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Best Local Similarity
Thes 8; Conserve
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Sequence 77, Application US/08417174
Patent No. 5844075
                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: US/08/417
FILLING DATE: US-APR-1995
PRIOR APPLICATION DATA:
APPLICATION UNMBER: US/08/231
FILLING DATE: 2-APR-1994
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
REFERENCE/DOCKET NUMBER: 2026
TELECOMMUNICATION INFORMATION:
TELEPAN: (212) 758-4800
TELEPAN: (212) 751-6849
INFORMATION FOR SEQ ID NO: 76:
                                                                                                                                                                    Query Match
Best Local :
                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Patent No. 5844075
GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: MELL
TITLE OF INVENTION: THE
TITLE OF INVENTION: METH
UNUMBER OF SEQUENCES: 125
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                            STRANDEDNESS:
TOPOLOGY: Unki
                                                                                                                                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWAKE: CURRENT APPLICATION DATA:
CURRENT APPLICATION NUMBER: US/08/417,174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
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                                                                                                                                                       Local Similarity hes 8; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER: IBM PC COMPATIBLE OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: ASCII
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STATE: NEW YORK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COUNTRY: USA
ZIP: 10154
                                                                                         1 KTWGQYWQV 9
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5844075
                                                                                                                                                                                                                                                                                       amino acid
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                                                                                                                                                                                                                                                                            Unknown
                                                                                                                                                                    84.7%;
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                                                                                                                                                    1; Mismatches
                                                                                                                                                                  Score 50; DB 2;
Pred. No. 1.4e+05;
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Pred. No. 1.4e+05;
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    Indels

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GENERAL INFORMATION:

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; TYPE: amino acid
; STRANDEDNESS: Unkn
; TOPOLOGY: Unknown
; MOLECULE TYPE: Pepti
US-08-417-174-77
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US-08-417-174-78
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                                                                                                                                                                                                                                                                                          Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
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Best Local Similarity
                                                                                                                                                                                                                                                                                        Sequence 78, Application US/08417174 Patent No. 5844075
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEFAX: (212) 751-684
TELEX: 421792
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS:
ADDRESSEE: MORGAN & FINNEGAN, L.L.P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 20
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
TELEPAX: (212) 751-6849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
REGISTRATION NUMBER: 37,341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/417,174
FILING DATE: 05-APR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/231,565
FILING DATE: 22-APR-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM: MEDIUM TYPE: FLOPPY |
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION: TITLE OF INVENTION:
               COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
                                                                                                                                                     CORRESPONDENCE ADDRESS:
                                                                                                                                                                     NUMBER OF SEQUENCES:
                                                                                                                                                                                      TITLE OF INVENTION: TITLE OF INVENTION:
                                                                                                                                                                                                                                      APPLICANT: KAWAKAMI,
APPLICANT: STEVEN A.
                                                                               CITY: NEW YORK
STATE: NEW YORK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER: IBM PC COMPATIBLE OPERATING SYSTEM: PC-DOS/MS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CITY: NEW YORK
STATE: NEW YORK
                                                              COUNTRY:
                                                                                                                   STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY:
                                                                                                                                     ADDRESSEE:
 COMPUTER:
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                                                                 USA
                                                                                                                     345 PARK AVENUE
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                                                                                                                                                                                                                                                     KAWAKAMI, YUTAKA; ROSENBERG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unknown
IBM PC COMPATIBLE
                                                                                                                                   MORGAN & FINNEGAN, L.L.P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FLOPPY DISK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unknown
                                                                                                                                                                                     MELANOMA ANTIGENS AND THERAPEUTIC THEIR USE IN DIAGNOSTIC AND THERAPEUTIC METHODS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MELANOMA ANTIGENS AND THERAPEUTIC THEIR USE IN DIAGNOSTIC AND THERAPEUTIC METHODS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           83.1%;
88.9%;
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                                                                                                                                                                      126
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 49; DB 2;
Pred. No. 1.4e+05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2026-4124US1
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                                                              ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
REGISTRATION NUMBER: 37,341
                                                                                                               APPLICATION NUMBER: US/08/417,174
FILING DATE: 05-APR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/231,565
FILING DATE: 22-APR-1994
CLASSIFICATION: 435
                                                                                                                                                                                                                   COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM: MEDIUM TYPE: FLOPPY
                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
              REFERENCE/DOCKET NUMBER: 20
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                      COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                          CITY: NEW YORK
                                                                                                                                                                                                                                                                                                                                                                                          STREET:
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345 PARK AVENUE

MORGAN & FINNEGAN, L.L.P

METHODS

THEIR USE IN DIAGNOSTIC AND THERAPEUTIC

USA

FLOPPY DISK

2026-4124US1

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Patent No. 584~..
Patent No. 584~..
Paweral INFORMATION:
                                                                                                                                                                                                                                               Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                   INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                             REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 20
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
TELEPAX: (212) 751-6849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/231,565
FILING DATE: 22-APR-1994
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                  MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE CHARACTERISTICS:
             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                 TYPE: amino acid
STRANDEDNESS: Unl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US/0: FILING DATE: 05-APR-1995
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                                                                79, Application US/08417174
3. 5844075
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             STEVEN A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ASCI
                                                                                                                                                                                                                               Conservative
                             KAWAKAMI, YUTAKA; ROSENBERG,
                                                                                                                                                                                                                                                                                                                                Peptide
                                                                                                                                                                                                                                                                                                                                                                   Unknown
                                                                                                                                                                                                                                               83.1%; Score 49; DB 2; L
100.0%; Pred. No. 1.4e+05;
MELANOMA ANTIGENS AND
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                                                                                                                                                                                                                                                              Length 9;
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Gaps

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; TYPE: amino acid
; STRANDEDNESS: Unkn
; TOPOLOGY: Unknown
; MOLECULE TYPE: Pepti
US-08-417-174-80
δõ
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Best Local Similarity
"hes 7; Conserve
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; STRANDEDNESS: Unknown
; TOPOLOGY: Unknown
; MOLECULE TYPE: Peptide
US-08-417-174-79
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US-08-417-174-80
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                         Query Match
Best Local Similarity
Matches 7; Conserv
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INFORMATION FOR SEQ ID NO:
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                            SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                            REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 20
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                    ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
                                                                                                                                                                                                                                                                                                                              FILING DATE: 05-APR-1995
PRIOR APPLICATION UMBER: US/08/231,565
FILING DATE: 22-APR-1994
                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FITLE OF INVENTION:
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 3 WGQYWQV 9
                                                                                                                                                                                                                    TELEFAX:
                                                                                                                                                                                                                                  TELEPHONE:
                                                                                                                                                                                                                                                                                                                   CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                              OPERATING SYSTEM:
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                                                                                                                                                               LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Application US/08417174
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                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                  (212) 751-6849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               USA
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                                                                                                                       Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KAWAKAMI, YUTAKA; ROSENBERG,
                                                                                                                                                                                                                                                                                                                                                                                                                           IBM PC COMPATIBLE
SYSTEM: PC-DOS/MS-DOS
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                                                                                                                                                                                                                                   (212) 758-4800
                                                                                                         Peptide
                                                                                                                                    Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            METHODS
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                      83.1%; Score 49; DB
100.0%; Pred. No. 1.4
Live 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MELANOMA ANTIGENS AND
THEIR USE IN DIAGNOSTIC AND THERAPEUTIC
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Pred. No.
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                     DB 2; L-
1.4e+05;
0;
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                         Indels
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                         0;
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                        Gaps
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                         0;
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RESULT 25
US-08-417-174-82
Sequence 82, Application US/08417174
Patent No. 5844075
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Best Local Similarity
"~+~hes 7; Conserve
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Patent No. 5
                                         GENERAL INFORMATION:
APPLICANT: KAWAKAMI,
APPLICANT: STEVEN A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                       TELEX: 421792
INFORMATION FOR SEQ ID NO:
TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY
COMPUTER: IBM PC COM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STREET: 34 CITY: NEW YORK
CITY: NEW YORK
TTATE: NEW YORK
                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELECOMMUNICATION INFORMATION: TELEPHONE: (212) 758-4800 TELEFAX: (212) 751-6849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 05-APR-1995
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OPERATING SYSTEM: PC-D
SOFTWARE: ASCII
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                 MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION: TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                            TYPE: amino acid
STRANDEDNESS: Un)
TOPOLOGY: Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US/0 FILING DATE: 22-APR-1994 CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY: US
ZIP: 10154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REGISTRATION NUMBER: 37 REFERENCE/DOCKET NUMBER:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CAROL M. GRUPPI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 345 PARK AVENUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STEVEN A.
                                                         KAWAKAMI, YUTAKA; ROSENBERG,
                                                                                                                                                                                                                                        Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IBM PC COMPATIBLE SYSTEM: PC-DOS/MS-DOS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FLOPPY DISK
                                                                                                                                                                                                                                                                                                                                                             Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        METHODS
                                                                                                                                                                                                                                                      83.1%;
100.0%;
               MELANOMA ANTIGENS AND THEIR USE IN DIAGNOSTIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MELANOMA ANTIGENS AND
THEIR USE IN DIAGNOSTIC AND THERAPEUTIC
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                                                                                                                                                                                                                                      0; Mismatches
                                                                                                                                                                                                                                                         Score 49; ; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2026-4124US1
                                                                                                                                                                                                                                                                    DB 2;
                                                                                                                                                                                                                                                      1.4e+05;
               AND THERAPEUTIC
                                                                                                                                                                                                                                                                     Length 9;
                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                        Gaps
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TYPE: amino acid
STRANDEDNESS: Unkno
TOPOLOGY: Unknown
MOLECULE TYPE: Peptid
US-08-417-174-82
                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 26
US-08-439-817-205
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Best Local Similarity luv.
Thes 7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                             Patent No.
                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
REGISTRATION UNMER: 37,341
REFERENCE/DOCKET NUMBER: 2026
TELECHONE: (212) 758-4800
TELECHONE: (212) 751-6849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US/08/417,174
FILING DATE: 05-APR-1995
PRIOR APPLICATION DATA:
APPLICATION UNMBER: US/08/231,565
FILING DATE: 22-APR-1994
CLASSIFICATION: 435
                                                                                                                                                                                                        APPLICANT: Martens, Christine L.
APPLICANT: Ruhland-Fritsch, Beatrice
TITLE OF INVENTION: Peptides and Compounds That Bind
TITLE OF INVENTION: Selectins Including Endothelial Leukocyte Adhesion
TITLE OF INVENTION: Molecule I (ELAM-1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
                                            COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                              CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                               APPLICANT:
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CURRENT APPLICATION DATA:
                                                                                                                                                                                                 NUMBER OF SEQUENCES:
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               COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                COUNTRY: U
ZIP: 94304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
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                                                                                                                                                             ADDRESSEE: Affymax Technologies, NV
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                                                                                                                                T: 4001 Miranda Ave. Palo Alto
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PatentIn Release #1.0, Version #1.25
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                                                                                                                                                                                                                                                                                            Jung
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100.0%; Pr
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RESULT 27
US-08-241-054-85
; Sequence 85, Application US/08241054
; Sequence 85, Application US/08241054
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Best Local Similarity
Strikes 5; Conserva
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; MOLECULE TYPE:
US-08-439-817-205
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 12 amino acids
TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                   APPLICANT: Ruhland-FJ
TITLE OF INVENTION: F
TITLE OF INVENTION: F
TITLE OF INVENTION: F
TITLE OF INVENTION: F
TITLE OF INVENTION: F
TITLE OF INVENTION: F
                                       COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
OPERATING SYSTEM: PC-DOS/MS-DOS
OFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/241,054
FILING DATE: 11-MAY-1994
FILING DATE: 11-MAY-1994
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APPLICANT:
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APPLICANT:
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FILING DATE: 05-MAY-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/881,395
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ATTORNEY/AGENT INFORMATION:
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MEDIUM TYPE: Floppy disk
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                                                                                                                                                                                                                               CITY: Alexandria
STATE: Virginia
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REFERENCE/DOCKET NUMBER: 000324-046/1056.1
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                               CLASSIFICATION:
                                                                                                                                                                                                                COUNTRY:
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APPLICATION NUMBER:
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                                                                                                                                                                                                                                                                699 Prince Street
                                                                                                                                                                                                                USA
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VENTION: Peptides and Compounds That Bind
VENTION: Selectins Including Endothelium Leukocyte Adhesion
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cwirla, Steven E. Dower, William J.
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Martens, Christine L.
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linear
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62.58;
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US 08/057,295
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FILING DATE: 05-MAY-

05-MAY-1993

APPLICATION NUMBER:

US 07/881,395

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; STRANDEDNESS:
; TOPOLOGY: line
; MOLECULE TYPE: 1
US-08-241-054-85
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Matches 5; Conserv
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           APPLICATION NUMBER: US 07/881,395
FILING DATE: 06-MAY-1992
ATTORNEY/AGENT INFORMATION:
NAME: Gerald F. Swiss
REGISTRATION NUMBER: 30,113
REFERENCE/DOCKET NUMBER: 000324-0
                                                                                                 PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/057,295
FILING DATE: 05-MAX-1993
PRIOR APPLICATION DATA:
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TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-854-7400
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MEDIUM TYPE: Floppy disk
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TELECOMMUNICATION INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                              CITY: Alexandria
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                                                                                                                                                                        CLASSIFICATION:
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                                                                                                                                                                                                     APPLICATION NUMBER:
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                                                                                                                                                                                                                                                                                                                                                                                 699 Prince Street
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VENTION: Peptides and Compounds That Bind
VENTION: Selectins Including Endothelium Leukocyte Adhesion
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ens, Christine L.
                                                                                                                                                                                                                                                                                                                                                                                                                                            Molecule 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Kerry J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          64.48;
                                                                                                                                                                                                    US/08/241,054
                                                                                                                                                                                                                                 Release #1.0, Version #1.25
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             000324-002
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Best Local Similarity
Watches 5; Conserve
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Patent No. 5648458
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                  TELEFAX: 415-424-0832:NFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                REFERENCE/DOCKET NUMBER: 10
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-496-2300
                                                                                                                                                                                      APPLICATION NUMBER: US 07/881,395 FILING DATE: 06-MAY-1992 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                   APPLICATION NUMBER: US 0: FILING DATE: 05-MAY-1993 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                              FILING DATE: 16-FEB-PRIOR APPLICATION DATA:
TOPOLOGY: 1
MOLECULE TYPE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION:
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                                        TYPE: amino acids
                                                                                                                                                             REGISTRATION NUMBER:
                          STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                             CITY: Palo Alto
STATE: California
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TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                             NAME:
                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                 COUNTRY:
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Dower, William J
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peptide
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16-FEB-1996
                        single
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Pred. No.
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Query Match Best Local Similarity

64.4%; 62.5%;

Score 38; Pred. No.

DB 1; 4.3;

Length 20;

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; LENGTH: 20 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
US-08-390-156A-43
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Search completed: July 3, 2001, 10:22:35 Job time: 1300 sec
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GENERAL INFORMATION:
APPLICANT: Cwirla, Steven E.
APPLICANT: Barrett, Ronald W.
APPLICANT: Dower, William J.
APPLICANT: Martens, Christine L.
TITLE OF INVENTION: Peptides and Compounds That Bind to
TITLE OF INVENTION: ELAM-1

NUMBER OF SEQUENCES: 113
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                                                                                                                                                                                                                                                                                                                                          TELEPHONE: 415-496-2300
TELEPAX: 415-424-0832
INFORMATION FOR SEQ ID NO: 43:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                            NAME: Swiss, Gerald F.
REGISTRATION NUMBER: 30,113
REFERENCE/DOCKET NUMBER: 1023.1A
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415.496-2300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US 08/057,295
FILING DATE: 05-WAY-1993
PRIOR APPLICATION DATA:
APPLICATION UNMBER: US 07/881,395
FILING DATE: 06-WAY-1992
ATTORREY/ACENT INFORMATION:
NAME: CETTER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US/08/390,156A FILING DATE: 16-FEB-1996 PRIOR APPLICATION DATA:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE: Affymax Technologies, N.V. STREET: 4001 Miranda Ave. CITY: Palo Alto STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ZIP: 94304
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